

A HUBBLE SPACE TELESCOPE SURVEY FOR NOVAE IN M87. I. LIGHT AND COLOR CURVES, SPATIAL DISTRIBUTIONS AND THE NOVA RATE¹

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ABSTRACT

The Hubble Space Telescope has imaged the central part of M87 over a 10 week span, leading to the discovery of 32 classical novae and nine fainter, likely very slow and/or symbiotic novae. In this first in a series of papers we present the M87 nova finder charts, and the light and color curves of the novae. We demonstrate that the rise and decline times, and the colors of M87 novae are uncorrelated with each other and with position in the galaxy. The spatial distribution of the M87 novae follows the light of the galaxy, suggesting that novae accreted by M87 during cannibalistic episodes are well-mixed. Conservatively using only the 32 brightest classical novae we derive a nova rate for M87: 363^{+33}_{-45} novae/yr. We also derive the luminosity-specific classical nova rate for this galaxy, which is $7.88^{+2.3}_{-2.6}/\text{yr}/10^{10}L_{\odot,K}$. Both rates are 3-4 times higher than those reported for M87 in the past, and similarly higher than those reported for all other galaxies. We suggest that most previous ground-based surveys for novae in external galaxies, including M87, miss most faint, fast novae, and almost all slow novae near the centers of galaxies.

Keywords: M87, novae, cataclysmic variables

1. INTRODUCTION AND MOTIVATION

Determining the binary stellar fraction throughout the Universe, a fundamental constraint on star formation, demands the identification and characterization of substantial populations of extragalactic stars that are unquestionably binary. Beyond the confines of our own Galaxy it becomes increasingly difficult to separate single from binary stellar populations. An important exception is the classical novae (CNe), which are both a 100% binary population and, during outburst, amongst the most luminous stars in any galaxy.

CNe are white dwarfs accreting hydrogen-rich matter from Roche-lobe filling secondaries (Kraft 1959; Warner 1995). The accumulation of order $10^{-5}M_{\odot}$ of hydrogen on a white dwarf leads to a thermonuclear runaway, Eddington or greater luminosity, and mass ejection at high speed, observed as a classical nova eruption (Starrfield et al. 1972; Prialnik et al. 1978). Many novae achieve luminosities in excess of 10^5L_{\odot} , making them easily detectable in external galaxies (Arp 1956; Rosino 1973; Ciardullo et al. 1990; Neill & Shara 2004). The most luminous CNe reach absolute magnitudes close to $M = -10$. Thus very large numbers of novae can be detected with the *Hubble Space Telescope* (HST) to well beyond the Coma Cluster of galaxies, and their near-constant luminosity 15 days after maximum light can be used as a distance indicator (Buscombe and de Vaucouleurs 1955; Shara 1981b; Ferrarese et al. 2003).

Four examples of what novae can teach us about the genesis and evolution of close binaries in different stellar populations and types of galaxies are the following. First, by demonstrating that nova rates, luminosities and/or spectra (Della Valle & Livio 1998) are different in disk and bulge-dominated galaxies, one could directly show that

close binary formation rates and histories are also different in these populations (Yungelson et al. 1997; Matteucci et al. 2003). Second, by mapping the locations of novae in cannibalistic massive central galaxies in clusters, or between galaxies, one can check if dynamical stirring has been effective in mixing swallowed populations throughout these galaxies or intracluster space (Neill et al. 2005; Shara 2006). Third, important binary parameters - white dwarf mass, luminosity and mass transfer rate - can be determined from the properties of nova eruptions (Priyalnik & Kovetz 1995; Yaron et al. 2005; Hillman et al. 2016) in external galaxies. Fourth, by using novae as proxies for all close binaries in very different kinds of galaxies, we can determine these binaries' spatial distributions relative to other populations (Hatano et al. 1997).

In addition, basic tests of the theory of novae become possible. Do the rates of decline from maximum brightness vary systematically with position in a given galaxy, or with Hubble type? Theory suggests that this should not occur, (Shara 1981a; Livio 1992), but a definitive observational demonstration is lacking. Observations could also determine the instantaneous luminosity function and the speed class distribution of novae in different kinds of galaxies - strong constraints on nova evolution theory.

Studies of novae in galaxies of the Local Group and beyond (Hubble 1929; Henize et al. 1954; Arp 1956; Rosino 1973; Pritchett & van den Bergh 1987; Tomaney & Shafter 1992; Neill & Shara 2004; Williams & Shafter 2004; Shafter et al. 2014; Curtin et al. 2015) have addressed some subset of these questions. Although M87 has been targeted for novae in the past (Pritchett & van den Bergh 1985; Shafter et al. 2000; Shara et al. 2004; Baltz et al. 2004; Madrid et al. 2007; Curtin et al. 2015), only a handful of novae with reasonably complete light curves have been detected to date in this massive elliptical galaxy, nine in M49 (Ferrarese et al. 2003) and six in other Virgo cluster ellipticals (Pritchett & van den Bergh 1987). The resolution and sensitivity of the Advanced Camera for Surveys of HST allowed us to probe the inner regions of M87, where galaxy light makes the detection of transients an observational challenge with ground based data. In this paper we report the detection and detailed characterization via HST of 32 erupting classical novae in M87, and nine likely slow and/or symbiotic novae. We are thus able to provide much more definitive answers to many of the above questions concerning novae in a massive elliptical galaxy for the first time.

The datasets used and our analysis methodology are described in Section 2. The time-lapse images and light and color curves of the M87 novae are presented in Section 3. Correlations amongst nova properties, and with position in M87 are presented in Section 4. The spatial distribution of the M87 novae and the observed nova luminosity distribution are detailed in Section 5. The nova rate in M87 (and in other galaxies) is discussed in Section 6. We briefly summarize our results in Section 7.

2. OBSERVATIONS

The data used to find novae were images taken for the HST Cycle-14 program 10543 (PI - E. A. Baltz). The goal of that program was to search for microlensing events in M87 using *I* band imagery for the primary search, and *V* band imagery to provide colors. Four observations, separated by five days, were followed by daily imaging for the remainder of the program, with the HST Advanced Camera for Surveys (ACS) in the F606W (hereafter *V* or *V* band) and F814W (hereafter *I* or *I* band) filters. The F814W exposures were sub-pixel dithered to ensure Nyquist sampling, allowing for the optimal use of the superb HST resolution. The dithers also allowed for the rejection of hot pixels and other defects, as well as cosmic ray rejection.

The ACS detector has a field-of-view (FOV) of 202" x 202" and a pixel scale of 0.05" (Mack et al. 2003). At the 16.4 ± 0.5 Mpc distance of M87 (Bird et al. 2010), 1" corresponds to 80 pc; WFC imaging thus covers an area of about 16 x 16 kpc centered on the M87 nucleus. A total of 254 ACS exposures were taken in 61 different visits over a period of 72 days from 2005 December 24 to 2006 March 5. The majority of exposures (205) were taken in the *I* band totaling 73,800 s. Color information was obtained with 49 images in the *V* band that combined amount to 24,500 s. Four 360 s exposures in the *I* band filter, yielding a 1440 s total exposure were followed by a single 500 s *V* exposure during each orbit. These observations provide unmatched temporal coverage of extragalactic transients as well as an unprecedented large FOV at very high resolution.

Archive-given names, observation dates and exposure times for all observations in each of the filters are given in Table 1. Several observations contain no useful data, but are kept in the table for completeness.

2.1. Finding the Novae

The 32 classical novae reported here were discovered independently by three different collaborators. We discuss their detection first. Nine additional, faint variables are likely to be slow and/or symbiotic novae, and are discussed separately at the end of this section.

Using only the *I* band images, 26 novae were found by TL. The methodology used by TL for careful exclusion of all

cosmic ray events and hot pixels, choice of a baseline level from which to seek changes, thresholds above which to flag candidates, candidate vetting and candidate photometry are discussed in detail in [Baltz et al. \(2004\)](#). The images were reduced to preserve and optimize the angular resolution. The four F814W images at a given epoch were interlaced to produce Nyquist image by the Fourier method of [Lauer \(1999\)](#). This method recovers a Nyquist image (2x finer pixels) from non-optimal dithers without interpolation kernels that can degrade the angular resolution. The Nyquist images were then rectified with sinc-function interpolation, which preserves the resolution of the images. Note that these procedures offer superior resolution to drizzle, which blurs the images at the resolution scale. The nightly reduced images were convolved with an optimal filter to highlight point-source variables. The search was done on difference frames, using the entire image set with rejection of statistical outliers as a template for the M87 background. A handful of very faint candidates, beyond the 26 noted above, were rejected in the interests of retaining only candidates that were clear and obvious variables.

The data were also independently searched for novae by TFD and by DLW. Both authors retrieved the flat-fielded science files (FLT.FITS) and best reference files from the HST public archive. Prior to their delivery the raw HST images are processed through the standard pipeline at the STScI. The standard ACS calibration pipeline (CALACS) performs basic reductions, viz., overscan subtraction, bias subtraction, dark subtraction, and flat fielding ([Siriani 2005](#)). Subsequent data reduction was carried out with the one step task MULTIDRIZZLE ([Koekemoer et al. 2002](#)) of the Space Telescope Data Analysis System (STSDAS) run within Pyraf. Multidrizzle performs distortion correction using updated reference files, removes cosmic rays, and combines all exposures taken in the same epoch into a final drizzled image (DRZ.FITS). For the final drizzled images that were used for this study TFD and DLW preserved the native ACS/WFC pixel size of $0.05''$.

All of the 26 novae discovered by TL, and five additional slow novae were discovered by TFD using one day and five-day Multidrizzled ([Koekemoer et al. 2002](#)) V band images (not difference images). Each five-day image was visually blinked against the first five days' Multidrizzled image to locate even the faintest variables in M87. In addition to the 31 candidates noted above, an additional 29 variables were also found by TFD, but noted to be fainter and redder than the 31 candidates noted above. Visual inspection led us to eliminate 20 candidates as borderline detections - all are too faint for reliable photometry. Nine candidates with measurable brightnesses, all of which are redder than the 31 novae noted above, were retained; we consider them to be likely symbiotic and/or very faint novae, as discussed below.

Most of the novae found by TL and TFD, and one additional nova, too faint to be detected by TL and only marginally seen in the 5 day Multidrizzled images, was discovered by DLW. This nova was only observed while declining in brightness. Its color and brightness behavior are consistent with those of the other 31 novae. DLW used the Welch-Stetson variability index ([Welch & Stetson 1993](#)) on the Multidrizzled images to find candidates. The driving assumptions of the Welch-Stetson variability index is that variability of a star is correlated between the two filters in use. That is, for instance, if a truly variable star becomes brighter in the V band it will also become brighter in the coeval I band frame. Random errors in magnitude are, by definition, uncorrelated between filters. Extraction of candidates required that they be detected at more than 8 epochs on multiple images. Background sky and galaxy light was taken eliminated via ALLFRAME ([Stetson 1994](#)).

Our completeness and detection limits are discussed in section 5.2, but we note here that they differ by four magnitudes between the center of M87 and the periphery of our FOV. Our faintest detections reach $V \sim 27$ and $I \sim 28$ for nova 29, near the edge of HST's FOV, described below. Nova 15, near the center of M87, is only detected when it brighter than $V \sim 24.5$ and $I \sim 23.5$.

The positions of all candidate novae were checked in the HST archival images of M87 taken for program GO-8592 (PI - J. Silk) ([Baltz et al. 2004](#)). This dataset consisted of 30 consecutive days of images of M87 taken with the Wide Field and Planetary Camera 2 (WFPC2) of HST through the F814W and F606W filters during 28 May through 25 June 2001, inclusive. The goal of this comparison of the two epochs' (separated by over 4 years) images was to flag candidates that might be recurrent and/or symbiotic novae, or Mira variables. None of the 32 classical novae were detected in the stacked 2001 frames. Only one of the nine faint variables (nova number 33) was unambiguously detected in the stacked 2001 frames.

Our final decision on whether to eliminate a variable candidate that was unambiguously real (i.e. seen on multiple nights in both filters) from the nova pool was determined by its colors. The evolution of the $(V - I)$ color curves of novae are distinct from those of Miras. Inspection of dozens of Mira variables in the American Association of Variable Star Observers database demonstrates that Miras never display a $(V - I)$ color bluer than $+2.0$. Every single one of the 32 classical novae, and 9 fainter variables noted above displays at least one epoch with $(V - I) < 0.5$. (The one exception with no well-defined colors, nova 15, reaches absolute magnitude ~ -8 in both filters; it is far too luminous

to be anything but a classical nova). Those blue colors unambiguously demonstrate that none of our nova candidates is a Mira variable.

The 32 classical novae and nine likely faint novae detected in our survey are mapped over an HST image of M87 in Figure 1. The spatial distribution of the novae, and checks for correlations between nova properties and position in the galaxy are described below.

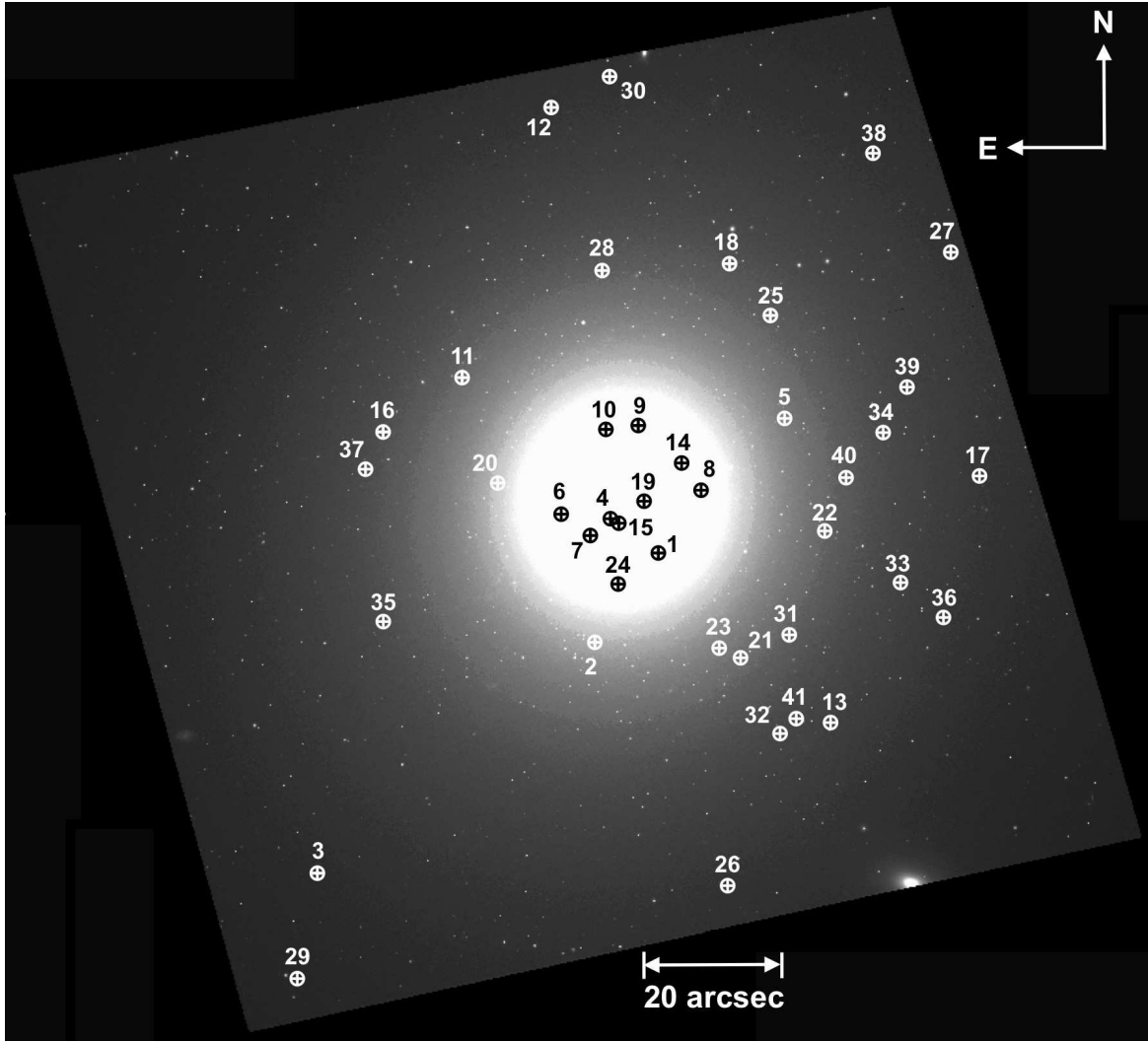


Figure 1. A map of the locations of 32 classical novae (numbers 1-32) in M87 overlaid on the full drizzled HST ACS/WFC *V* band image. Nine fainter variables (numbered 33-41), which are too blue to be Miras, are likely to be very slow and/or symbiotic novae.

3. RESULTS

3.1. Time-lapse Images

Figures 2a through 2u, inclusive, are montages of 1.5 arcsec x 1.5 arcsec “postage stamp”, I band images of each of the 32 classical novae and 9 likely slow novae detected in M87. We used the I band images for this display because they have better resolution and signal to noise for the single days than the V images, as there were four times as many individual exposures taken in each epoch. The novae are ordered from brightest to faintest in peak V magnitude. In cases where the nova is only detected on the rising or falling part of its light curve, the peak measured brightness is probably not the brightest that the nova eventually becomes. The sequence of observations starts in the top-left corner, and proceeds horizontally across a row, followed by each of the four succeeding rows. Each nova is marked with a vertical and horizontal tick mark on the day of its maximum brightness.

The brighter novae are both striking and obvious, usually rising to maximum brightness in just a few days. Inspection of the Figure 2 images suggests, at first glance, that some of the novae are “out of order”, with apparently brighter novae ordered later in the sequence than earlier, “fainter” novae. An example is Nova 15, detected for only 6 successive days, which appears much fainter than Nova 16 (which is seen on 14 days). The reason for this apparent discrepancy is the very large spatial variation in M87’s surface brightness. As is clear from Figure 1, Nova 15 is located considerably closer to M87’s bright center than Nova 16, making it much harder to detect against its bright background. We will return to this point when discussing incompleteness corrections in our determination of M87’s nova rate.

3.2. Light and Color Curves

We used aperture photometry (in the daily V band and I band original images) to measure the light curves of each nova. We determined that there was no need to subtract a smoothed image of M87 from these frames for accurate photometry as long as we avoided including globular clusters in the apertures. Aperture photometry was checked against PSF photometry in the I images to ensure consistency, and excellent agreement was found. All photometric measurements are listed in Table 2, which contains the light curve and color curve data for each detected nova: the HST file number, days from maximum light of each observation, date of observation, V band magnitude and error, I band magnitude and error, $V - I$ color and error in $V - I$. Six of the novae were already in decline when the HST observations began (Novae 9, 23, 25, 27, 30 and 32), while 12 others (Novae 3, 8, 11, 12, 13, 14, 16, 17, 18, 22, 27 and 29) were fading but still visible when the observations ended. Figures 3a through 3u, inclusive, display the classical 32 novae and 9 likely slow novae V and I light curves, and their ($V - I$) color curves, respectively. Table 2 contains the light curve data.

Figures 4a, 4b and 5 display 31 nova light curves (since these are V band curves, M87 Nova 32 is not included) over-plotted onto each other to show their V magnitudes, rises, and declines in comparison to each other. Figures 6a, 6b and 7 complement Figures 4a, 4b and 5 by displaying the I band light curves for all 32 classical novae. Our novae run the gamut from bright, fast novae to faint, slow novae.

Based on its planetary nebula luminosity function, surface brightness fluctuations method, linear diameters of globular clusters and tip of the red giant branch method, the distance to M87 was determined to be $d = (16.4 \pm 0.5)$ Mpc by Bird et al. (2010), corresponding to a distance modulus of 31.1, which we adopt. Then the apparent F606W magnitude of our brightest nova (nova 1) at peak brightness (which is $V = 21.8$), corresponds to an absolute V magnitude of -9.3. The brightest novae, like our nova 1, are an order of magnitude more luminous than the Eddington luminosity of a nearly-Chandrasekhar mass white dwarf (Shara 1981a). The peak brightness of our faintest classical nova (nova 32) is $V = 25.3$, corresponding to an absolute V magnitude of -5.8. The peak brightness of our faintest slow, redder nova candidates is $I = 25.6$, corresponding to an absolute I magnitude of -5.5. These correspond to the Eddington luminosities of the lowest mass white dwarfs, roughly 0.4 - 0.5 Msun, that can produce thermonuclear runaways (Yaron et al. 2005). The vast majority of classical novae (Shara 1981a,b) are found in exactly the brightness range we find for the M87 novae.

The only nova whose light curve displays a somewhat time-symmetric rise and fall is nova number 23. This raises the possibility that the brightening of this one object might be due to a microlensing event. However, the $V - I$ color of object 23 changes by over 1.5 magnitudes during the outburst, ruling out microlensing.

The faintest novae and the most luminous Mira variables overlap in luminosity (Darnley et al. 2004). Thus Miras, near maximum, may be mistaken for slow novae in surveys which only search for variables without measuring their colors. Fortunately, Miras become bluer as they approach maximum light, while novae are reddest at maximum (Darnley et al. 2004). The shape of a variable’s color curve is thus a good indicator whether it is a Mira or a nova. We demonstrate this in Figure 8a, where the color curves of 31 M87 classical novae, and our fainter variables are plotted.

The smoothed, median classical nova light curve (seen as a thick red line in Figure 8a) is clearly reddest, with $(V - I) \sim 0.4$, near maximum brightness. This happens because nova envelopes' photospheres are at maximum size, and coolest, near maximum light. At first glance, the faintest nova candidates (labelled Symb novae for convenience) might be mistaken for Miras as they display the opposite color evolution - bluest at peak - as seen in Figure 8a. However, as already noted, these variables are 2.5 magnitudes too blue to be Miras. A closeup of the nova color curves is shown in Figure 8b.

4. RISE AND DECLINE TIME CORRELATIONS

In Table 3 we list the angular distance (in arcseconds) from the center of M87, the Right Ascension and Declination, the maximum brightnesses in V and I band magnitudes, and the times to rise to, and fall from maximum brightness by 1 and 2 magnitudes, for each of the classical novae in our sample.

The novae included in the decline and rise time statistics are only the ones where a clear decline and rise are measurable. If a nova is only observed to rise or only to decline, then the color at peak brightness $(V - I)_{peak}$ cannot be accurately determined, so these novae were excluded from the plots and statistics. 22/32 novae were used in the decline statistics and 21/32 novae were used in the rise statistics. In Figure 9 we plot the $(V - I)$ color, at maximum V light, versus the time to rise 1 or 2 magnitudes to maximum light, or the time to decline 1 or 2 magnitudes from maximum light. It is clear from the plots that there is no correlation between nova color and the rapidity with which it rises to, or declines from peak brightness.

In Figure 10 we plot the time required for a nova to rise either 1 or 2 magnitudes, to reach peak brightness, versus the time required to decline 1 magnitude from peak brightness. There is no correlation between the rise and decline times of the M87 novae.

The absolute magnitude - rate of decline relationship (often referred to as the MMRD relation) (Zwicky 1936; McLaughlin 1945) has been investigated as a distance indicator for nearly a century. We will defer a full discussion of the implications of the results of the present work for MMRD to a subsequent paper. Here, in Figure 11, we simply plot the peak V magnitudes of the 23 novae we observed in M87 (with well-observed peak magnitudes) versus the time to decline 2 magnitudes from peak brightness. The extensive nova grid models of Yaron et al. (2005) first predicted the existence of faint, fast novae. Kasliwal et al. (2011) first observationally demonstrated the existence of eight of these novae in M31. These faint, fast novae greatly weaken the MMRD correlation. Six of the 23 novae in M87 with well-measured properties are similar to the faint, fast novae of Kasliwal et al. (2011), confirming that these objects are both common and ubiquitous. Figure 11 strengthens Kasliwal et al. (2011)'s conclusion that the scatter in the MMRD is far too large for it to be anything but a very rough distance indicator.

In Figure 12 we plot the histograms of the observed times required for novae to rise to maximum, or decline from maximum by one or two magnitudes. The decline time histograms are subject to at least two observational biases. First, the interval over which we observed M87 - 72 days - is significantly shorter than the decline times (years) of the most slowly declining novae. Second, the most slowly declining novae are also amongst the faintest such objects. The incompleteness of detection of faint novae, discussed below, rises towards the center of M87. Thus we are confident that the relative numbers of very rapidly declining novae ($t_{1decline}$ and $t_{2decline}$ less than 5 days and 10 days, respectively) are larger than those of novae taking 10 days and 20 days, respectively. The relative numbers of fainter, more slowly declining novae are subject to significant incompleteness corrections.

It is often said that novae rise to maximum brightness in just a day or two. Figure 12 demonstrates that this statement is an oversimplification. 9 of 22 novae (41%) take longer than 2 days to complete the last 1 magnitude rise to maximum. Even more striking is that 6 of 22 novae (27 %) require 5 days or more to rise the last 2 magnitudes to maximum light. This is in accord with theoretical models of nova light curves (Hillman et al. 2014).

In Figure 13 we plot the rise and decline times, and the $(V - I)$ colors at peak brightness, as functions of the radial distance of each nova from the center of M87. This is motivated by the suggestion of Della Valle & Livio (1998) that faster and more luminous novae are more concentrated to the plane of our Galaxy than fainter and slower novae. While there is no way of knowing how many Virgo Cluster galaxies M87 has absorbed, that number is likely to be large. The M87 novae must have been accreted from many galaxies. If we regard the novae as tracers of past accretion events, we can check if dynamical stirring has thoroughly mixed M87's accreted galaxies, and by implication, its novae. It is clear that there are no trends in any of the plots of Figure 13; we do not see faster or bluer novae concentrated in any particular region of M87.

5. SPATIAL DISTRIBUTION

5.1. *Cumulative novae/M87 light*

We measured the cumulative V band light of M87 in circular, concentric annuli. This is a good approximation as M87 is almost spherical, and its isophotal twists are minor (Kormendy et al. 2009). We then plotted the cumulative nova fraction and the cumulative light of M87 in Figure 14. The novae appear to track the light of M87 with remarkable fidelity. This is confirmed by the Kolmogorov-Smirnoff test which finds no evidence for a difference in the M87 light and nova distributions, even at just the 95% confidence level. Shafter et al. (2000) first suggested that the novae in M87 track the galaxy’s light from a sparse ground-based sample (9 novae); this is now demonstrated to be valid into the central regions of M87 on the basis of our larger sample.

The 32 novae detected in our survey, as suggested by Figure 1, show no obvious, strong concentration in the inner 10 arcsec of M87, contrary to the suggestion of Madrid et al. (2007). However, our F606W and F814W filter images are less sensitive than the HST STIS near-ultraviolet observations of Madrid et al. (2007) to novae. This is especially true in the inner core of M87, where the high surface brightness of the light of red giants makes the detection of novae nearly impossible in visible light. Completeness tests are clearly needed to settle this question.

5.2. *Completeness*

Tests were conducted in order to determine our completeness in finding novae in M87. We added 10 artificial novae in successive radial annuli of width 20 pixels. The magnitudes of these artificial novae ranged from ~ 21 to ~ 27 in increments of 0.2 mags for V five-day drizzled images, and both I single and five-day drizzled images. We then blinked through images, going to successively fainter magnitudes, to measure when the artificial novae were no longer visible in each radial annulus. This process yielded limiting magnitudes for nova detection at specific distances from the center of M87. The magnitude at which our completeness of detection is 50% as a function of radial distance from the center of M87 is presented in Figure 15. As noted in Section 3.2, the least luminous novae ever detected display absolute V magnitudes $M = -5.8$ (Shara 1981a,b), corresponding to $V = 25.3$ in M87. Figure 15 warns that we must be missing a majority of the faint novae in the inner 25" of M87, and almost all novae in the inner 10". In the following section we discuss how we correct for this incompleteness in our determination of the nova rate in M87.

6. THE NOVA RATE IN M87

Ground-based searches for extragalactic novae are often plagued by gaps in observing due to bad weather and/or the full moon, as well as large nightly variations in seeing and detection limits. None of these effects, of course, occur for HST data, so we were able to gather a highly uniform imaging dataset for M87 that is unique for studies of extragalactic novae. No other galaxy has ever been surveyed by HST as regularly, for as long a period of time, and with the same high cadence of observations, as M87.

6.1. *A simple estimate*

An simple estimate of the M87 annual nova rate R is the number of novae observed to erupt during 72 days (26 novae) divided by the fraction of a year over which they were observed. (We exclude the six novae, numbered 9, 23, 26, 28, 30 and 32, because their eruptions were underway before the observing window started. To be extremely conservative in our rate estimate we also exclude the nine faint variables, numbered 33-41, that are likely slow and/or symbiotic novae). We find $R = 26/(72/365) = 132 \pm 11$ novae/yr, where the estimated error is simply due to Poisson statistics. No corrections for incompleteness due to observing gaps (Ciardullo et al 1990) are needed because of the high cadence - daily - of observations. We can also be confident that we are not missing novae because of dust obscuration, as evidenced by M87’s lack of far infrared emission (Baes et al. 2010), lack of cool molecular gas (Tan et al. 2008; Salomé & Combes 2008) and non-detection of significant intrinsic absorption in the galaxy’s X-ray spectrum (Böhringer et al. 2002).

A first significant correction that we must apply to the rate calculation is the fraction of novae we miss because they fall outside of HST’s 202" x 202" FOV. Kormendy et al. (2009) measured the V band magnitude of M87 to be 8.30. We measured M87’s surface brightness profile from our F814W image and matched it to the Kormendy et al. (2009) extended V band profile, allowing us to correct for the sky background of the ACS field. This also gave us the V band zero point, tying our photometry to that of Kormendy et al. (2009). We calculate the total apparent V mag for the portion of M87 in the ACS as $V = 9.28$, corresponding to 41% of the galaxy’s light. Applying only this areal correction, while ignoring both our incompleteness in detection of faint novae (discussed below), brings our simple rate estimate to 322 ± 27 novae/yr.

A second significant correction that we must apply to our rate calculation is the number of novae we miss because of the high surface brightness in the inner part of M87. Inspection of Figure 1 shows that nova 31, the second faintest

of the entire sample (and, with nova 32, as faint as any nova has ever been measured at maximum light), is detected just 30 arc sec from the nucleus. This suggests that very few novae are missed because of background light any further out than nova 31. Conversely, 10 of the 15 brightest novae in our sample of 32 novae are located within 10" of M87's nucleus. Even more telling is that none of the 17 faintest novae in our sample are found in the inner 10" of M87. Both of these facts strongly suggest that fainter novae are being missed there. Figure 15 quantifies this suggestion, as discussed in the previous section, and we incorporate it in the following simulation.

6.2. Simulated novae and the nova rate in M87

A more sophisticated simulation of the nova rate, which rigorously allows for the incompleteness quantified in Figure 15, and a realistic distribution of nova peak brightnesses and fade times was extensively described and implemented by Neill & Shara (2004) to determine the nova rate in M81. We have adopted the same general methodology, which involves choosing synthetic novae at random from a representative sample of novae with a distribution of speed classes and maximum brightnesses that match those in the galaxy under observation. Each randomly chosen nova is placed in the 202" x 202" HST FOV of M87, weighted by the local surface brightness. If the nova was bright enough to be detected against the M87 background light of Figure 16 on at least 2 occasions then it was counted as part of the nova rate. Full details of the simulation methodology are given in Neill & Shara (2004).

The accuracy of our nova rate simulations in M87 is tied to the similarity of the distribution of nova maximum brightnesses and rates of decline in the set of light curves from which we draw novae at random. Until recently the largest sample of classical novae detected in uniform fashion in a single, *densely* sampled broadband survey was the 30 novae in M31 found by (Arp 1956) over the course of two observing seasons spanning 18 months. (The five year-long survey of Ciardullo et al. (1987) detected 35 novae, but in H α , and with much sparser time sampling. Rosino (1973) and Hubble (1929) identified 44 and 85 novae in M31, respectively, but their light curves are relatively sparsely sampled and many of the rates of decline are indeterminate as maximum brightness was missed). The 18 month baseline of Arp's M31 sample is important because slow novae (those declining on timescales longer than 100 -150 days) are difficult to detect in shorter surveys, even those with a cadence as high as our M87 survey. The slowest novae in Arp's sample displayed decline times of 150 days, but slower Galactic novae (e.g. PU Vul and V723 Cas) are known to exist. Are they common? It is important to answer this question as a distribution of light curves that is skewed towards fast, luminous novae and missing very slow, less luminous novae will incorrectly estimate a galaxy's nova rate.

Despite the irregular cadence of observations, and gaps due to lunation and variable seeing, the fraction of very slow novae in M31 (those novae with decline times of years), can be estimated from the work of Hubble (1929). Three novae out of 85 he identified were visible for *at least* 4.5, 5.5 and 11 yrs. They are probably symbiotic novae (see Mikolajewska (2010) for a recent review of symbiotic novae). The next longest observed nova in Hubble (1929)'s sample was seen for 238 days; during this time it was within 1.7 magnitudes of its peak brightness. It was not observed in previous or subsequent observing seasons. Three very slow symbiotic novae from a total sample of 85 novae corresponds to an occurrence rate of about 3.5%.

Recently the results of a search for novae during the OGLE campaign have been published by Mróz et al. (2015). 34 Galactic Bulge novae with well-determined decline times were identified in this and other Galactic Bulge surveys, as were two symbiotic novae. This suggests a somewhat higher incidence of symbiotic novae, of order 5.5%, than detected by Hubble (1929), but of course both samples suffer from small-number statistics. Nevertheless, it is clear from both the Hubble (1929) and Mróz et al. (2015) samples that very slow novae, detectable for longer than about two years, are probably not more than about 5% of the total nova population.

The 15-year long OGLE nova survey has the longest baseline and highest cadences (typically several times weekly) of any published continuum-band nova survey. As already noted, high cadence is important to detect the fastest novae, while long baselines (years) are essential to detect the most slowly declining novae. A comparison of the well-determined decline times for 22 novae in M87 from the survey presented in this paper, 30 novae in M31 from Arp's survey and 34 Galactic Bulge novae from Mróz et al. (2015) is shown in Figure 16. It is clear that only the Mróz et al. (2015) Bulge survey detects the slowest novae, including one with a decay time of 600 days omitted from the figure. We thus chose to use the Mróz et al. (2015) sample, rather than our own M87 or the Arp M31 samples as the source of novae for our simulation. The decay times of the Bulge sample are very well determined. We assigned their absolute magnitudes at maximum by matching the decay times to those of M31 novae.

We carried out 10,000 trials in which we chose novae at random from the Mróz et al. (2015) Bulge sample of novae, and placed them at random in M87, weighted by the local surface brightness. Our simulation determined whether the randomly chosen nova was bright enough to be seen against the light of M87 where it was placed. The results

are shown in Figure 17, wherein we derive a most probable rate in the $202'' \times 202''$ HST FOV to be $R = 149^{+13.4}_{-18.3}$ novae/year. This rate is consistent with the simple estimate (132 ± 11 novae/yr) given above. Also as noted above, the ACS FOV covers just 41% of the light of M87. Correcting for this areal incompleteness we arrive at the global M87 nova rate of 363^{+33}_{-45} novae/year in M87. This rate is 4 times higher than the ground-based observations' estimate of 91 ± 34 novae/yr in M87 (Shafter et al. 2000), and 2.4 times higher than the ground-based estimated rate of M87 novae of 154^{+23}_{-19} of (Curtin et al. 2015).

By adopting an M87 distance of 15.2 ± 0.2 Mpc, Shafter et al. (2000) derived a K - band luminosity of M87 of $39.8 \pm 8.2 \times 10^{10} L_{\odot, K}$. Correcting that luminosity to our adopted distance of 16.4 ± 0.4 Mpc, and combining with our rate of 363^{+33}_{-45} novae/year we derive a luminosity-specific nova rate (LSNR) of $7.88^{+2.3}_{-2.6}/\text{yr}/10^{10} L_{\odot, K}$, which is also 3.4 times higher than the measurement of Shafter et al. (2000). This discrepancy is understandable if previous (mostly) ground-based surveys miss both the faint, fast novae, and almost all slow novae near the centers of galaxies. We conclude that the nova rates and LSNR of galaxies are several times larger than the values currently accepted.

7. SUMMARY AND CONCLUSIONS

During a 72 day-long observing campaign we have located 32 erupting classical novae in the giant elliptical galaxy M87. We also found nine likely slow and/or symbiotic novae. Their light and color curves are presented, and their spatial distribution is shown to follow that of the galaxy light. No correlations are found between the colors, rise or decline times, or position within M87, of the novae. Six of the novae are of the faint and fast variety first described by Kasliwal et al. (2011). This detection demonstrates the ubiquitous nature of these novae, and further weakens claims of the utility of the decline rates of classical novae as distance indicators.

We find twice as many of the most rapidly declining novae (in less than 5 days) compared to novae with 5-10 day decline times. We compare the distribution of speed classes of our 32 classical novae in M87 with those in M31 and in the Galactic bulge. Each of the longer time baseline surveys (in M31 and the Galactic bulge) has a larger fraction of slow novae than our M87 sample. After accounting for incompleteness in our discovery of fainter novae, especially near the center of M87, and for the unobserved outer parts of this galaxy, we derive a annual nova rate of 363^{+33}_{-45} novae/yr for M87. This is a conservative estimate because we omitted the fainter slow and/or symbiotic nova candidates. We also report the LSNR for this galaxy, which is $7.88^{+2.3}_{-2.6}/\text{yr}/10^{10} L_{\odot, K}$. Both rates are 3.4x times larger than those for M87 and M49 reported by Shafter et al. (2000) and by Ferrarese et al. (2003), respectively. We suggest that most previous surveys miss both the faint, fast novae, and almost all slow novae near the centers of galaxies. Thus the nova rates and LSNR of galaxies are probably several times larger than the values currently accepted.

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Table 1. HST Observations of M87

Root Name	Obs Date	Exp Time	Root Name	Obs Date	Exp Time
	DD-MM-YYY	(sec)		DD-MM-YYY	(sec)
HST ACS/WFC (F606W)					
j9e001zdq	24-12-2005	500.0	j9e032pxq	04-02-2006	500.0
j9e002hgq	29-12-2005	500.0	j9e033smq	05-02-2006	500.0
j9e003d6q	03-01-2006	500.0	j9e034w9q	06-02-2006	500.0
j9e004atq	08-01-2006	500.0	j9e035bkq	06-02-2006	500.0
j9e005d7q	09-01-2006	500.0	j9e036dbq	07-02-2007	500.0
j9e006j4q	10-01-2006	500.0	j9e037gnq	08-02-2006	500.0
j9e007lwq	11-01-2006	500.0	j9e038k1q	09-02-2006	500.0
j9e008orq	12-01-2006	500.0	j9e039m9q	10-02-2006	500.0
j9e009qlq	13-01-2006	500.0	j9e040q6q	10-02-2006	500.0
j9e010sgq	14-01-2006	500.0	j9e041rwq	11-02-2006	500.0
j9e011uaq	14-01-2006	500.0	j9e042u8q	12-02-2006	500.0
j9e012wzq	15-01-2006	500.0	j9e043dmq	13-02-2006	500.0
j9e013ceq ^a	16-01-2006	500.0	j9e044h0q	14-02-2006	500.0
j9e014enq	17-01-2006	500.0	j9e045j6q ^a	15-02-2006	500.0
j9e015iyq	18-01-2006	500.0	j9e046moq ^a	15-02-2006	500.0
j9e016m9q	19-01-2006	500.0	j9e047onq	16-02-2006	500.0
j9e017orq	20-01-2006	500.0	j9e068qxq	17-02-2006	500.0
j9e018r9q	21-01-2006	500.0	j9e073tfq	18-02-2006	500.0
j9e019umq	22-01-2006	500.0	j9e076v4q	19-02-2006	500.0
j9e020cdq	23-01-2006	500.0	j9e086aoq	20-02-2006	500.0
j9e021f9q	24-01-2006	500.0	j9e092e9q	21-02-2006	500.0
j9e022hlq	25-01-2006	500.0	j9e048fzq	21-02-2006	500.0
j9e023llq	26-01-2006	500.0	j9e094giq	21-02-2006	500.0
j9e024p5q	27-01-2006	500.0	j9e049wmq	26-02-2006	500.0
j9e025sdq	28-01-2006	500.0	j9e0a1bhq	27-02-2006	500.0
j9e026vxq ^a	29-01-2006	500.0	j9e0a5drq ^a	28-02-2006	500.0
j9e027blq	30-01-2006	500.0	j9e0a6g6q	01-03-2006	500.0
j9e028ejq	31-01-2006	500.0	j9e0b8k2q	02-03-2006	500.0
j9e029h6q	01-02-2006	500.0	j9e0a8p0q	03-03-2006	500.0
j9e030khq	02-02-2006	500.0	j9e050txq	04-03-2006	500.0
j9e031ndq	03-02-2006	500.0	j9e0c4xiq	05-03-2006	500.0
HST ACS/WFC (F814W)					
j9e001z6q	24-12-2005	360.0	j9e029gzq	01-02-2006	360.0
j9e002h9q	29-12-2005	360.0	j9e030kaq	02-02-2006	360.0
j9e003czq	03-01-2006	360.0	j9e031n6q	03-02-2006	360.0
j9e004amq	08-01-2006	360.0	j9e033sfq	05-02-2006	360.0
j9e005d0q	09-01-2006	360.0	j9e035bdq	06-02-2006	360.0
j9e006ixq	10-01-2006	360.0	j9e036d4q	07-02-2006	360.0
j9e007lpq	11-01-2006	360.0	j9e037ggq	08-02-2006	360.0
j9e009geq	12-01-2006	360.0	j9e038juq	09-02-2006	360.0
j9e010s9q	13-01-2006	360.0	j9e039m2q	10-02-2006	360.0
j9e011u3q	14-01-2006	360.0	j9e040pzq	11-02-2006	360.0
j9e012wsq	15-01-2006	360.0	j9e042u1q	12-02-2006	360.0
j9e013c7q	16-01-2006	360.0	j9e043dfq	13-02-2006	360.0
j9e014egq	17-01-2006	360.0	j9e044gtq	14-02-2006	360.0

Table 1 continued on next page

Table 1 (*continued*)

Root Name	Obs Date	Exp Time	Root Name	Obs Date	Exp Time
	DD-MM-YYY	(sec)		DD-MM-YYY	(sec)
j9e015irq	18-01-2006	360.0	j9e047ogq	16-02-2006	360.0
j9e017okq	20-01-2006	360.0	j9e073t8q	18-02-2006	360.0
j9e018r2q	21-01-2006	360.0	j9e076uxq	19-02-2006	360.0
j9e019ufq	22-01-2006	360.0	j9e086ahq	20-02-2006	360.0
j9e020c6q	23-01-2006	360.0	j9e092e2q	20-02-2006	360.0
j9e021f2q	24-01-2006	360.0	j9e049wfq	26-02-2006	360.0
j9e022heq	25-01-2006	360.0	j9e0a1baq	27-02-2007	360.0
j9e023leq	26-01-2006	360.0	j9e0a6fzq	01-03-2006	360.0
j9e024oyq	27-01-2006	360.0	j9e0b8jvq	02-03-2006	360.0
j9e025s6q	28-01-2006	360.0	j9e0a8otq	03-03-2006	360.0
j9e027beq	30-01-2006	360.0	j9e050tqq	04-03-2006	360.0
j9e028ecq	31-01-2006	360.0	j9e0c4cbq	05-03-2006	360.0
HST ACS/WFC (F850LP)					
j8fs02beq	19-01-2003	560.0	j8fs02bgq	19-01-2003	560.0
HST WFPC2/PC (F300W)			HST WFPC2/PC (F450W)		
u3be040br	25-02-1998	3620.0	u3be0407r	25-02-1998	3320.0
HST WFPC2/PC (F606W)					
u3be0409r	25-02-1998	260	u6731605r	06-12-2001	400
u6730105r	28-05-2001	400	u6731705r	13-06-2001	400
u6730205r	29-05-2001	400	u6731805r	14-06-2001	400
u6730305r	30-05-2001	400	u6731905r	15-06-2001	400
u6730405r	31-05-2001	400	u6732005r	16-06-2001	400
u6730505r	06-01-2001	400	u6732105r	17-06-2001	400
u6730605r	06-02-2001	400	u6732205r	18-06-2001	400
u6730705r	06-03-2001	400	u6732305r	19-06-2001	400
u6730805r	06-04-2001	400	u6732405r	20-06-2001	400
u6730905m	06-05-2001	400	u6732505r	21-06-2001	400
u6731005r	06-06-2001	400	u6732605r	22-06-2001	400
u6731105r	06-07-2001	400	u6732705r	23-06-2001	400
u6731205r	06-08-2001	400	u6732805r	24-06-2001	400
u6731305r	06-09-2001	400	u6732905m	25-06-2001	400
u6731405r	06-10-2001	400	u6733005r	26-06-2001	400
u6731505r	06-11-2001	400			
HST WFPC2/PC (F814W)					
u2ck0d06t	02-03-1995	30	u6731601r	06-12-2001	260
u6730101r	28-05-2001	260	u6731602r	06-12-2001	260
u6730102r	28-05-2001	260	u6731603r	06-12-2001	260
u6730103r	28-05-2001	260	u6731604r	06-12-2001	260
u6730104r	28-05-2001	260	u6731701r	13-06-2001	260
u6730201r	29-05-2001	260	u6731702r	13-06-2001	260
u6730202r	29-05-2001	260	u6731703r	13-06-2001	260
u6730203r	29-05-2001	260	u6731704r	13-06-2001	260
u6730204r	29-05-2001	260	u6731801r	14-06-2001	260
u6730301r	30-05-2001	260	u6731802r	14-06-2001	260
u6730302r	30-05-2001	260	u6731803r	14-06-2001	260
u6730303r	30-05-2001	260	u6731804r	14-06-2001	260
u6730304r	30-05-2001	260	u6731901r	15-06-2001	260

Table 1 continued on next page

Table 1 (*continued*)

Root Name	Obs Date DD-MM-YYY	Exp Time (sec)	Root Name	Obs Date DD-MM-YYY	Exp Time (sec)
u6730401r	31-05-2001	260	u6731902m	15-06-2001	260
u6730402r	31-05-2001	260	u6731903r	15-06-2001	260
u6730403r	31-05-2001	260	u6731904r	15-06-2001	260
u6730404r	31-05-2001	260	u6732001r	16-06-2001	260
u6730501r	06-01-2001	260	u6732002r	16-06-2001	260
u6730502r	06-01-2001	260	u6732003r	16-06-2001	260
u6730503m	06-01-2001	260	u6732004r	16-06-2001	260
u6730504r	06-01-2001	260	u6732101r	16-06-2001	260
u6730601r	06-02-2001	260	u6732102r	16-06-2001	260
u6730602r	06-02-2001	260	u6732103r	16-06-2001	260
u6730603r	06-02-2001	260	u6732104r	17-06-2001	260
u6730604r	06-02-2001	260	u6732201r	18-06-2001	260
u6730701r	06-03-2001	260	u6732202r	18-06-2001	260
u6730702r	06-03-2001	260	u6732203r	18-06-2001	260
u6730703r	06-03-2001	260	u6732204r	18-06-2001	260
u6730704r	06-03-2001	260	u6732301r	19-06-2001	260
u6730801r	06-04-2001	260	u6732302r	19-06-2001	260
u6730802r	06-04-2001	260	u6732303r	19-06-2001	260
u6730803r	06-04-2001	260	u6732304r	19-06-2001	260
u6730804r	06-04-2001	260	u6732401r	20-06-2001	260
u6730901r	06-05-2001	260	u6732402r	20-06-2001	260
u6730902r	06-05-2001	260	u6732403r	20-06-2001	260
u6730903r	06-05-2001	260	u6732404r	20-06-2001	260
u6730904r	06-05-2001	260	u6732501r	20-06-2001	260
u6731001r	06-06-2001	260	u6732502r	20-06-2001	260
u6731002r	06-06-2001	260	u6732503r	21-06-2001	260
u6731003r	06-06-2001	260	u6732504r	21-06-2001	260
u6731004m	06-06-2001	260	u6732601r	21-06-2001	260
u6731101r	06-07-2001	260	u6732602r	21-06-2001	260
u6731102r	06-07-2001	260	u6732603r	22-06-2001	260
u6731103r	06-07-2001	260	u6732604r	22-06-2001	260
u6731104r	06-07-2001	260	u6732701r	22-06-2001	260
u6731201r	06-08-2001	260	u6732702r	22-06-2001	260
u6731202r	06-08-2001	260	u6732703r	23-06-2001	260
u6731203r	06-08-2001	260	u6732704r	23-06-2001	260
u6731204r	06-08-2001	260	u6732801r	24-06-2001	260
u6731301r	06-09-2001	260	u6732802r	24-06-2001	260
u6731302r	06-09-2001	260	u6732803r	24-06-2001	260
u6731303r	06-09-2001	260	u6732804r	24-06-2001	260
u6731304r	06-09-2001	260	u6732901r	25-06-2001	260
u6731401r	06-10-2001	260	u6732902r	25-06-2001	260
u6731402r	06-10-2001	260	u6732903r	25-06-2001	260
u6731403r	06-10-2001	260	u6732904r	25-06-2001	260
u6731404r	06-10-2001	260	u6733001r	25-06-2001	260
u6731501r	06-11-2001	260	u6733002r	26-06-2001	260
u6731502r	06-11-2001	260	u6733003r	26-06-2001	260
u6731503r	06-11-2001	260	u6733004r	26-06-2001	260
u6731504r	06-11-2001	260			

Table 1 continued on next page

Table 1 (*continued*)

Root Name	Obs Date	Exp Time	Root Name	Obs Date	Exp Time
	DD-MM-YYY	(sec)		DD-MM-YYY	(sec)

^aEmpty observations. Not used in analysis, but shown here for completeness.

Table 2.

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
M87 Nova 1											
j9e001zdq	-17.37	24-12-2005	—	—	j9e001z6q	-17.37	24-12-2005	27.843	1.06	—	—
j9e002hgq	-12.43	29-12-2005	—	—	j9e002h9q	-12.39	29-12-2005	29.933	2.72	—	—
j9e003d6q	-7.37	03-01-2006	27.070	1.302	j9e003czq	-6.33	03-01-2006	—	—	—	—
j9e004atq	-2.12	08-01-2006	23.333	0.040	j9e004amq	-1.13	08-01-2006	23.223	0.03	0.110	0.050
j9e005d7q	-1.26	09-01-2006	22.561	0.020	j9e005d0q	-0.26	09-01-2006	22.423	0.01	0.138	0.022
j9e006j4q	0.00	10-01-2006	21.837	0.012	j9e006ixq	0.94	10-01-2006	21.733	0.01	0.104	0.016
j9e007lwq	1.13	11-01-2006	21.942	0.012	j9e007lpq	2.13	11-01-2006	21.543	0.01	0.399	0.016
j9e008orq	2.00	12-01-2006	22.069	0.013	—	—	—	—	—	—	—
j9e009qlq	2.73	13-01-2006	22.206	0.018	j9e009geq	3.74	13-01-2006	21.583	0.01	0.623	0.021
j9e010sgq	3.54	14-01-2006	22.294	0.018	j9e010s9q	4.54	13-01-2006	21.623	0.01	0.671	0.021
j9e011uaq	4.49	14-01-2006	22.391	0.020	j9e011u3q	5.53	14-01-2006	21.683	0.01	0.708	0.022
j9e012wzq	5.29	15-01-2006	22.065	0.015	j9e012wsq	6.33	15-01-2006	21.773	0.01	0.292	0.018
j9e013ceq	6.13	16-01-2006	—	—	j9e013c7q	7.13	16-01-2006	21.833	0.01	—	—
j9e014enq	7.01	17-01-2006	22.578	0.021	j9e014egq	8.00	17-01-2006	21.893	0.01	0.685	0.023
j9e015iyq	8.01	18-01-2006	22.617	0.023	j9e015irq	9.00	18-01-2006	21.983	0.01	0.634	0.025
j9e016m9q	9.01	19-01-2006	22.723	0.026	—	—	—	—	—	—	—
j9e017orq	10.07	20-01-2006	22.805	0.026	j9e017okq	11.06	20-01-2006	22.173	0.01	0.632	0.028
j9e018r9q	11.01	21-01-2006	22.875	0.024	j9e018r2q	11.99	21-01-2006	22.343	0.01	0.532	0.026
j9e019umq	12.01	22-01-2006	23.109	0.035	j9e019ufq	12.99	22-01-2006	22.513	0.02	0.596	0.040
j9e020cdq	13.07	23-01-2006	23.074	0.032	j9e020c6q	14.06	23-01-2006	22.703	0.02	0.371	0.038
j9e021f9q	14.08	24-01-2006	23.481	0.047	j9e021f2q	15.12	24-01-2006	22.943	0.02	0.538	0.051
j9e022hlq	15.08	25-01-2006	23.675	0.045	j9e022heq	16.12	25-01-2006	23.193	0.03	0.482	0.054
j9e023llq	16.08	26-01-2006	24.363	0.119	j9e023leq	17.12	26-01-2006	23.563	0.04	0.800	0.126
j9e024p5q	17.02	27-01-2006	24.710	0.172	j9e024oyq	18.05	27-01-2006	23.953	0.06	0.757	0.182
j9e025sdq	18.02	28-01-2006	25.816	0.389	j9e025s6q	19.05	28-01-2006	25.413	0.20	0.403	0.437
j9e026vxq	19.02	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	19.95	30-01-2006	—	—	j9e027beq	20.92	30-01-2006	26.233	0.40	—	—
j9e028ejq	21.01	31-01-2006	—	—	j9e028ecq	22.05	31-01-2006	28.313	1.43	—	—
j9e029h6q	21.93	01-02-2006	—	—	j9e029gzq	22.92	01-02-2006	—	—	—	—
j9e030khq	22.93	02-02-2006	—	—	j9e030kaq	23.92	02-02-2006	28.073	1.26	—	—
j9e031ndq	23.87	03-02-2006	—	—	j9e031n6q	24.87	03-02-2006	26.993	0.64	—	—
j9e032pxq	24.81	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	25.61	05-02-2006	—	—	j9e033sfq	26.60	05-02-2006	—	—	—	—
j9e034w9q	27.40	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	28.32	06-02-2006	—	—	j9e035bdq	28.32	06-02-2006	—	—	—	—
j9e036dbq	29.14	07-02-2006	—	—	j9e036d4q	29.18	07-02-2006	26.673	0.60	—	—
j9e037gnq	29.98	08-02-2006	—	—	j9e037ggq	29.99	08-02-2006	—	—	—	—
j9e038k1q	30.79	09-02-2006	—	—	j9e038juq	30.79	09-02-2006	30.863	3.64	—	—
j9e039m9q	31.60	10-02-2006	—	—	j9e039m2q	31.59	10-02-2006	28.173	1.34	—	—
j9e040q6q	32.45	10-02-2006	—	—	j9e040pzq	32.45	10-02-2006	—	—	—	—
j9e041rwq	33.25	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	34.07	12-02-2006	—	—	j9e042u1q	34.11	12-02-2006	—	—	—	—
j9e043dmq	34.92	13-02-2006	—	—	j9e043dfq	34.92	13-02-2006	28.213	1.40	—	—
j9e044h0q	35.72	14-02-2006	—	—	j9e044gtq	35.72	14-02-2006	27.213	0.75	—	—
j9e045j6q	36.53	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	37.33	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	38.13	16-02-2006	—	—	j9e047ogq	38.13	16-02-2006	27.953	1.31	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e068qxq	38.93	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	39.73	18-02-2006	—	—	j9e073t8q	39.73	18-02-2006	—	—	—	—
j9e076v4q	40.67	19-02-2006	—	—	j9e076uxq	40.70	19-02-2006	27.103	0.76	—	—
j9e086aoq	41.66	20-02-2006	—	—	j9e086ahq	41.70	20-02-2006	27.293	0.84	—	—
j9e092e9q	42.53	21-02-2006	—	—	j9e092e2q	42.57	20-02-2006	26.723	0.52	—	—
j9e048fzq	43.12	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	43.37	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	48.19	26-02-2006	—	—	j9e049wfq	48.23	26-02-2006	—	—	—	—
j9e0a1bhq	49.03	27-02-2006	—	—	j9e0a6fzq	49.03	01-03-2006	—	—	—	—
j9e0a5drq	49.85	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	50.64	01-03-2006	—	—	j9e0b8jvq	50.64	02-03-2006	29.053	2.01	—	—
j9e0b8k2q	51.66	02-03-2006	—	—	j9e0a8otq	51.69	03-03-2006	26.703	0.51	—	—
j9e0a8p0q	52.77	03-03-2006	—	—	j9e050tqq	52.76	04-03-2006	29.133	2.14	—	—
j9e050txq	54.10	04-03-2006	—	—	j9e0c4cbq	54.10	05-03-2006	—	—	—	—
j9e0c4xiq	54.97	05-03-2006	—	—	j9e0a1baq	54.96	27-02-2007	27.763	1.13	—	—
M87 Nova 2											
j9e001zdq	-16.11	24-12-2005	28.083	0.938	j9e001z6q	-16.11	24-12-2005	—	—	—	—
j9e002hgg	-11.17	29-12-2005	27.600	0.744	j9e002h9q	-11.13	29-12-2005	—	—	—	—
j9e003d6q	-6.11	03-01-2006	26.518	0.314	j9e003czq	-5.07	03-01-2006	—	—	—	—
j9e004atq	-0.86	08-01-2006	22.887	0.015	j9e004amq	0.13	08-01-2006	22.693	0.01	0.194	0.018
j9e005d7q	0.00	09-01-2006	22.248	0.010	j9e005d0q	1.00	09-01-2006	21.853	0.01	0.395	0.014
j9e006j4q	1.26	10-01-2006	22.931	0.017	j9e006ixq	2.20	10-01-2006	22.373	0.01	0.558	0.020
j9e007lwq	2.39	11-01-2006	23.297	0.019	j9e007lpq	3.39	11-01-2006	22.573	0.01	0.724	0.021
j9e008orq	3.26	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	3.99	13-01-2006	23.521	0.025	j9e009geq	5.00	13-01-2006	22.983	0.01	0.538	0.027
j9e010sgq	4.80	14-01-2006	23.729	0.031	j9e010s9q	5.80	13-01-2006	23.153	0.02	0.576	0.037
j9e011uaq	5.75	14-01-2006	23.860	0.028	j9e011u3q	6.79	14-01-2006	23.363	0.02	0.497	0.034
j9e012wzq	6.55	15-01-2006	24.047	0.034	j9e012wsq	7.59	15-01-2006	23.483	0.02	0.564	0.039
j9e013ceq	7.39	16-01-2006	—	—	j9e013c7q	8.39	16-01-2006	23.643	0.03	—	—
j9e014enq	8.27	17-01-2006	24.084	0.041	j9e014egq	9.26	17-01-2006	23.753	0.03	0.331	0.051
j9e015iyq	9.27	18-01-2006	24.196	0.044	j9e015irq	10.26	18-01-2006	23.993	0.04	0.203	0.059
j9e016m9q	10.27	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	11.33	20-01-2006	24.631	0.057	j9e017okq	12.32	20-01-2006	24.103	0.04	0.528	0.070
j9e018r9q	12.27	21-01-2006	24.761	0.058	j9e018r2q	13.25	21-01-2006	24.353	0.05	0.408	0.077
j9e019umq	13.27	22-01-2006	24.929	0.073	j9e019ufq	14.25	22-01-2006	24.443	0.05	0.486	0.088
j9e020cdq	14.33	23-01-2006	—	—	j9e020c6q	15.32	23-01-2006	24.673	0.07	—	—
j9e021f9q	15.34	24-01-2006	25.051	0.089	j9e021f2q	16.38	24-01-2006	24.713	0.06	0.338	0.107
j9e022hlq	16.34	25-01-2006	24.911	0.084	j9e022heq	17.38	25-01-2006	24.923	0.08	-0.012	0.116
j9e023llq	17.34	26-01-2006	25.036	0.082	j9e023leq	18.38	26-01-2006	25.283	0.11	-0.247	0.137
j9e024p5q	18.28	27-01-2006	25.118	0.092	j9e024oyq	19.31	27-01-2006	25.083	0.09	0.035	0.129
j9e025sdq	19.28	28-01-2006	25.166	0.080	j9e025s6q	20.31	28-01-2006	25.473	0.13	-0.307	0.153
j9e026vxq	20.28	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	21.21	30-01-2006	25.289	0.104	j9e027beq	22.18	30-01-2006	25.303	0.10	-0.014	0.144
j9e028ejq	22.27	31-01-2006	25.089	0.111	j9e028ecq	23.31	31-01-2006	25.693	0.15	-0.604	0.187
j9e029h6q	23.19	01-02-2006	25.638	0.114	j9e029gzq	24.18	01-02-2006	25.873	0.19	-0.235	0.222
j9e030khq	24.19	02-02-2006	25.644	0.118	j9e030kaq	25.18	02-02-2006	26.193	0.23	-0.549	0.259
j9e031ndq	25.13	03-02-2006	25.553	0.132	j9e031n6q	26.13	03-02-2006	25.633	0.14	-0.080	0.192
j9e032pxq	26.07	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	26.87	05-02-2006	25.672	0.143	j9e033sfq	27.86	05-02-2006	26.533	0.32	-0.861	0.350
j9e034w9q	28.66	05-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e035bkq	29.58	06-02-2006	25.537	0.119	j9e035bdq	29.58	06-02-2006	25.853	0.18	-0.316	0.216
j9e036dbq	30.40	07-02-2006	25.823	0.191	j9e036d4q	30.44	07-02-2006	26.953	0.41	-1.130	0.452
j9e037gnq	31.24	08-02-2006	25.739	0.136	j9e037ggq	31.25	08-02-2006	26.703	0.34	-0.964	0.366
j9e038k1q	32.05	09-02-2006	25.517	0.143	j9e038juq	32.05	09-02-2006	26.673	0.33	-1.156	0.360
j9e039m9q	32.86	10-02-2006	—	—	j9e039m2q	32.85	10-02-2006	27.793	0.75		
j9e040q6q	33.71	10-02-2006	26.049	0.194	j9e040pzq	33.71	10-02-2006	27.203	0.48	-1.154	0.518
j9e041rwq	34.51	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	35.33	12-02-2006	—	—	j9e042u1q	35.37	12-02-2006	26.833	0.37		
j9e043dmq	36.18	13-02-2006	25.887	0.143	j9e043dfq	36.18	13-02-2006	27.303	0.55	-1.416	0.568
j9e044h0q	36.98	14-02-2006	25.737	0.150	j9e044gtq	36.98	14-02-2006	26.853	0.35	-1.116	0.381
j9e045j6q	37.79	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	38.59	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	39.39	16-02-2006	25.735	0.151	j9e047ogq	39.39	16-02-2006	26.223	0.26	-0.488	0.301
j9e068qxq	40.19	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	40.99	18-02-2006	26.178	0.253	j9e073t8q	40.99	18-02-2006	—	—	—	—
j9e076v4q	41.93	19-02-2006	25.843	0.155	j9e076uxq	41.96	19-02-2006	—	—	—	—
j9e086aoq	42.92	20-02-2006	26.382	0.266	j9e086ahq	42.96	20-02-2006	—	—	—	—
j9e092e9q	43.79	21-02-2006	25.891	0.209	j9e092e2q	43.83	20-02-2006	—	—	—	—
j9e048fzq	44.38	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	44.63	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	49.45	26-02-2006	26.325	0.235	j9e049wfq	49.49	26-02-2006	—	—	—	—
j9e0a1bhq	50.29	27-02-2006	26.070	0.279	j9e0a6fzq	50.29	01-03-2006	—	—	—	—
j9e0a5drq	51.11	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	51.90	01-03-2006	26.598	0.333	j9e0b8jvq	51.90	02-03-2006	—	—	—	—
j9e0b8k2q	52.92	02-03-2006	26.130	0.205	j9e0a8otq	52.95	03-03-2006	28.593	1.17	-2.463	1.188
j9e0a8p0q	54.03	03-03-2006	26.576	0.390	j9e050tqq	54.02	04-03-2006	—	—	—	—
j9e050txq	55.36	04-03-2006	27.550	0.678	j9e0c4cbq	55.36	05-03-2006	—	—	—	—
j9e0c4xiq	56.23	05-03-2006	26.474	0.329	j9e0a1baq	56.22	27-02-2007	—	—	—	—
M87 Nova 3											
j9e001zdq	-57.10	24-12-2005	—	—	j9e001z6q	-57.10	24-12-2005	29.953	1.63	—	—
j9e002hgq	-52.16	29-12-2005	—	—	j9e002h9q	-52.12	29-12-2005	29.203	1.09	—	—
j9e003d6q	-47.10	03-01-2006	—	—	j9e003czq	-46.06	03-01-2006	28.643	0.70	—	—
j9e004atq	-41.85	08-01-2006	—	—	j9e004amq	-40.86	08-01-2006	—	—	—	—
j9e005d7q	-40.99	09-01-2006	—	—	j9e005d0q	-39.99	09-01-2006	29.823	1.55	—	—
j9e006j4q	-39.73	10-01-2006	—	—	j9e006ixq	-38.79	10-01-2006	30.733	2.23	—	—
j9e007lwq	-38.60	11-01-2006	—	—	j9e007lpq	-37.60	11-01-2006	—	—	—	—
j9e008orq	-37.73	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-37.00	13-01-2006	—	—	j9e009geq	-35.99	13-01-2006	—	—	—	—
j9e010sgq	-36.19	14-01-2006	—	—	j9e010s9q	-35.19	13-01-2006	28.933	0.87	—	—
j9e011uaq	-35.24	14-01-2006	—	—	j9e011u3q	-34.20	14-01-2006	—	—	—	—
j9e012wzq	-34.44	15-01-2006	—	—	j9e012wsq	-33.40	15-01-2006	28.623	0.75	—	—
j9e013ceq	-33.60	16-01-2006	—	—	j9e013c7q	-32.60	16-01-2006	—	—	—	—
j9e014enq	-32.72	17-01-2006	—	—	j9e014egq	-31.73	17-01-2006	—	—	—	—
j9e015iyq	-31.72	18-01-2006	—	—	j9e015irq	-30.73	18-01-2006	27.353	0.29	—	—
j9e016m9q	-30.72	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-29.66	20-01-2006	—	—	j9e017okq	-28.67	20-01-2006	27.463	0.32	—	—
j9e018r9q	-28.72	21-01-2006	—	—	j9e018r2q	-27.74	21-01-2006	—	—	—	—
j9e019umq	-27.72	22-01-2006	—	—	j9e019ufq	-26.74	22-01-2006	—	—	—	—
j9e020cdq	-26.66	23-01-2006	—	—	j9e020c6q	-25.67	23-01-2006	28.713	0.82	—	—
j9e021f9q	-25.65	24-01-2006	—	—	j9e021f2q	-24.61	24-01-2006	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e022hlq	-24.65	25-01-2006	—	—	j9e022heq	-23.61	25-01-2006	—	—	—	—
j9e023llq	-23.65	26-01-2006	—	—	j9e023leq	-22.61	26-01-2006	29.603	1.34	—	—
j9e024p5q	-22.71	27-01-2006	—	—	j9e024oyq	-21.68	27-01-2006	—	—	—	—
j9e025sdq	-21.71	28-01-2006	—	—	j9e025s6q	-20.68	28-01-2006	—	—	—	—
j9e026vxq	-20.71	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-19.78	30-01-2006	—	—	j9e027beq	-18.81	30-01-2006	30.943	2.45	—	—
j9e028ejq	-18.72	31-01-2006	—	—	j9e028ecq	-17.68	31-01-2006	—	—	—	—
j9e029h6q	-17.80	01-02-2006	—	—	j9e029gzq	-16.81	01-02-2006	—	—	—	—
j9e030khq	-16.80	02-02-2006	—	—	j9e030kaq	-15.81	02-02-2006	28.143	0.54	—	—
j9e031ndq	-15.86	03-02-2006	—	—	j9e031n6q	-14.86	03-02-2006	—	—	—	—
j9e032pxq	-14.92	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-14.12	05-02-2006	—	—	j9e033sfq	-13.13	05-02-2006	27.743	0.39	—	—
j9e034w9q	-12.33	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-11.41	06-02-2006	—	—	j9e035bdq	-11.41	06-02-2006	—	—	—	—
j9e036dbq	-10.59	07-02-2006	—	—	j9e036d4q	-10.55	07-02-2006	28.653	0.70	—	—
j9e037gnq	-9.75	08-02-2006	—	—	j9e037ggq	-9.74	08-02-2006	—	—	—	—
j9e038k1q	-8.94	09-02-2006	—	—	j9e038juq	-8.94	09-02-2006	28.333	0.62	—	—
j9e039m9q	-8.13	10-02-2006	—	—	j9e039m2q	-8.14	10-02-2006	—	—	—	—
j9e040q6q	-7.28	10-02-2006	—	—	j9e040pzq	-7.28	10-02-2006	29.023	0.97	—	—
j9e041rwq	-6.48	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	-5.66	12-02-2006	—	—	j9e042u1q	-5.62	12-02-2006	—	—	—	—
j9e043dmq	-4.81	13-02-2006	—	—	j9e043dfq	-4.81	13-02-2006	27.913	0.47	—	—
j9e044h0q	-4.01	14-02-2006	—	—	j9e044gtq	-4.01	14-02-2006	28.403	0.66	—	—
j9e045j6q	-3.20	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-2.40	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	-1.60	16-02-2006	22.964	0.012	j9e047ogq	-1.60	16-02-2006	22.713	0.01	0.251	0.016
j9e068qxq	-0.80	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	0.00	18-02-2006	22.635	0.010	j9e073t8q	0.00	18-02-2006	22.933	0.01	-0.298	0.014
j9e076v4q	0.94	19-02-2006	24.024	0.021	j9e076uxq	0.97	19-02-2006	23.653	0.02	0.371	0.029
j9e086aoq	1.93	20-02-2006	24.305	0.023	j9e086ahq	1.97	20-02-2006	23.903	0.02	0.402	0.030
j9e092e9q	2.80	21-02-2006	—	—	j9e092e2q	2.84	20-02-2006	24.003	0.02	—	—
j9e048fzq	3.39	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	3.64	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	8.46	26-02-2006	—	—	j9e049wfq	8.50	26-02-2006	25.423	0.06	—	—
j9e0a1bhq	9.30	27-02-2006	—	—	j9e0a6fzq	9.30	01-03-2006	25.593	0.07	—	—
j9e0a5drq	10.12	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	10.91	01-03-2006	—	—	j9e0b8jvq	10.91	02-03-2006	25.903	0.10	—	—
j9e0b8k2q	11.93	02-03-2006	—	—	j9e0a8otq	11.96	03-03-2006	25.753	0.08	—	—
j9e0a8p0q	13.04	03-03-2006	—	—	j9e050tqq	13.03	04-03-2006	25.923	0.09	—	—
j9e050txq	14.37	04-03-2006	—	—	j9e0c4cbq	14.37	05-03-2006	25.943	0.10	—	—
j9e0c4xiq	15.24	05-03-2006	—	—	j9e0a1baq	15.23	27-02-2007	26.113	0.11	—	—
M87 Nova 4											
j9e001zdzq	-59.03	24-12-2005	—	—	j9e001z6q	-59.03	24-12-2005	—	—	—	—
j9e002hgq	-54.09	29-12-2005	—	—	j9e002h9q	-54.05	29-12-2005	—	—	—	—
j9e003d6q	-49.03	03-01-2006	—	—	j9e003czq	-47.99	03-01-2006	—	—	—	—
j9e004atq	-43.78	08-01-2006	—	—	j9e004amq	-42.79	08-01-2006	—	—	—	—
j9e005d7q	-42.92	09-01-2006	—	—	j9e005d0q	-41.92	09-01-2006	—	—	—	—
j9e006j4q	-41.66	10-01-2006	—	—	j9e006ixq	-40.72	10-01-2006	—	—	—	—
j9e007lwq	-40.53	11-01-2006	—	—	j9e007lpq	-39.53	11-01-2006	26.823	0.86	—	—
j9e008orq	-39.66	12-01-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e009qlq	-38.93	13-01-2006	—	—	j9e009geq	-37.92	13-01-2006	27.703	1.36	—	—
j9e010sgq	-38.12	14-01-2006	—	—	j9e010s9q	-37.12	13-01-2006	27.033	0.94	—	—
j9e011uaq	-37.17	14-01-2006	—	—	j9e011u3q	-36.13	14-01-2006	26.613	0.79	—	—
j9e012wzq	-36.37	15-01-2006	—	—	j9e012wsq	-35.33	15-01-2006	—	—	—	—
j9e013ceq	-35.53	16-01-2006	—	—	j9e013c7q	-34.53	16-01-2006	26.903	0.88	—	—
j9e014enq	-34.65	17-01-2006	—	—	j9e014egq	-33.66	17-01-2006	27.243	1.09	—	—
j9e015iyq	-33.65	18-01-2006	25.031	0.526	j9e015irq	-32.66	18-01-2006	26.223	0.68	-1.192	0.860
j9e016m9q	-32.65	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-31.59	20-01-2006	—	—	j9e017okq	-30.60	20-01-2006	—	—	—	—
j9e018r9q	-30.65	21-01-2006	25.076	0.500	j9e018r2q	-29.67	21-01-2006	—	—	—	—
j9e019umq	-29.65	22-01-2006	25.410	0.625	j9e019ufq	-28.67	22-01-2006	25.853	0.39	-0.443	0.737
j9e020cdq	-28.59	23-01-2006	25.587	0.939	j9e020c6q	-27.60	23-01-2006	—	—	—	—
j9e021f9q	-27.58	24-01-2006	—	—	j9e021f2q	-26.54	24-01-2006	—	—	—	—
j9e022hlq	-26.58	25-01-2006	—	—	j9e022heq	-25.54	25-01-2006	—	—	—	—
j9e023llq	-25.58	26-01-2006	25.721	0.772	j9e023leq	-24.54	26-01-2006	26.363	0.62	-0.642	0.990
j9e024p5q	-24.64	27-01-2006	—	—	j9e024oyq	-23.61	27-01-2006	27.703	1.25	—	—
j9e025sdq	-23.64	28-01-2006	25.003	0.507	j9e025s6q	-22.61	28-01-2006	27.153	0.95	-2.150	1.077
j9e026vxq	-22.64	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-21.71	30-01-2006	—	—	j9e027beq	-20.74	30-01-2006	26.463	0.67	—	—
j9e028ejq	-20.65	31-01-2006	—	—	j9e028ecq	-19.61	31-01-2006	27.953	1.63	—	—
j9e029h6q	-19.73	01-02-2006	—	—	j9e029gzq	-18.74	01-02-2006	27.153	1.03	—	—
j9e030khq	-18.73	02-02-2006	25.809	0.906	j9e030kaq	-17.74	02-02-2006	26.553	0.67	-0.744	1.127
j9e031ndq	-17.79	03-02-2006	—	—	j9e031n6q	-16.79	03-02-2006	27.113	1.03	—	—
j9e032pxq	-16.85	04-02-2006	25.257	0.608	—	—	—	—	—	—	—
j9e033smq	-16.05	05-02-2006	—	—	j9e033sfq	-15.06	05-02-2006	—	—	—	—
j9e034w9q	-14.26	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-13.34	06-02-2006	—	—	j9e035bdq	-13.34	06-02-2006	—	—	—	—
j9e036dbq	-12.52	07-02-2006	—	—	j9e036d4q	-12.48	07-02-2006	28.383	1.99	—	—
j9e037gnq	-11.68	08-02-2006	—	—	j9e037ggq	-11.67	08-02-2006	26.913	0.85	—	—
j9e038k1q	-10.87	09-02-2006	25.243	0.568	j9e038juq	-10.87	09-02-2006	—	—	—	—
j9e039m9q	-10.06	10-02-2006	25.376	0.643	j9e039m2q	-10.07	10-02-2006	—	—	—	—
j9e040q6q	-9.21	10-02-2006	—	—	j9e040pzq	-9.21	10-02-2006	—	—	—	—
j9e041rwq	-8.41	11-02-2006	25.009	0.482	—	—	—	—	—	—	—
j9e042u8q	-7.59	12-02-2006	—	—	j9e042u1q	-7.55	12-02-2006	—	—	—	—
j9e043dmq	-6.74	13-02-2006	25.084	0.461	j9e043dfq	-6.74	13-02-2006	25.583	0.34	-0.499	0.573
j9e044h0q	-5.94	14-02-2006	25.207	0.582	j9e044gtq	-5.94	14-02-2006	—	—	—	—
j9e045j6q	-5.13	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-4.33	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	-3.53	16-02-2006	—	—	j9e047ogq	-3.53	16-02-2006	—	—	—	—
j9e068qxq	-2.73	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	-1.93	18-02-2006	—	—	j9e073t8q	-1.93	18-02-2006	24.453	0.15	—	—
j9e076v4q	-0.99	19-02-2006	23.312	0.121	j9e076uxq	-0.96	19-02-2006	23.163	0.05	0.149	0.131
j9e086aoq	0.00	20-02-2006	22.738	0.064	j9e086ahq	0.04	20-02-2006	22.283	0.02	0.455	0.067
j9e092e9q	0.87	21-02-2006	23.043	0.063	j9e092e2q	0.91	20-02-2006	22.293	0.03	0.750	0.070
j9e048fzq	1.46	21-02-2006	23.307	0.091	—	—	—	—	—	—	—
j9e094giq	1.71	21-02-2006	23.450	0.110	—	—	—	—	—	—	—
j9e049wmq	6.53	26-02-2006	24.382	0.283	j9e049wfq	6.57	26-02-2006	24.013	0.09	0.369	0.297
j9e0a1bhq	7.37	27-02-2006	24.649	0.351	j9e0a6fzq	7.37	01-03-2006	23.973	0.09	0.676	0.362
j9e0a5drq	8.19	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	8.98	01-03-2006	25.078	0.473	j9e0b8jvq	8.98	02-03-2006	24.823	0.18	0.255	0.506

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e0b8k2q	10.00	02-03-2006	—	—	j9e0a8otq	10.03	03-03-2006	24.673	0.16	—	—
j9e0a8p0q	11.11	03-03-2006	—	—	j9e050tqq	11.10	04-03-2006	24.493	0.13	—	—
j9e050txq	12.44	04-03-2006	—	—	j9e0c4cbq	12.44	05-03-2006	24.803	0.17	—	—
j9e0c4xiq	13.31	05-03-2006	—	—	j9e0a1baq	13.30	27-02-2007	24.793	0.18	—	—
M87 Nova 5											
j9e001zdq	-46.51	24-12-2005	—	—	j9e001z6q	-46.51	24-12-2005	27.373	0.47	—	—
j9e002hgq	-41.57	29-12-2005	—	—	j9e002h9q	-41.53	29-12-2005	—	—	—	—
j9e003d6q	-36.51	03-01-2006	—	—	j9e003czq	-35.47	03-01-2006	29.023	1.39	—	—
j9e004atq	-31.26	08-01-2006	27.522	0.531	j9e004amq	-30.27	08-01-2006	—	—	—	—
j9e005d7q	-30.40	09-01-2006	27.581	0.737	j9e005d0q	-29.40	09-01-2006	—	—	—	—
j9e006j4q	-29.14	10-01-2006	27.570	0.598	j9e006ixq	-28.20	10-01-2006	—	—	—	—
j9e007lwq	-28.01	11-01-2006	26.978	0.400	j9e007lpq	-27.01	11-01-2006	29.743	2.01	-2.765	2.049
j9e008orq	-27.14	12-01-2006	27.626	0.688	—	—	—	—	—	—	—
j9e009qlq	-26.41	13-01-2006	26.722	0.329	j9e009geq	-25.40	13-01-2006	—	—	—	—
j9e010sgq	-25.60	14-01-2006	—	—	j9e010s9q	-24.60	13-01-2006	—	—	—	—
j9e011uaq	-24.65	14-01-2006	27.433	0.764	j9e011u3q	-23.61	14-01-2006	28.463	1.07	-1.030	1.315
j9e012wzq	-23.85	15-01-2006	—	—	j9e012wsq	-22.81	15-01-2006	—	—	—	—
j9e013ceq	-23.01	16-01-2006	—	—	j9e013c7q	-22.01	16-01-2006	27.883	0.74	—	—
j9e014enq	-22.13	17-01-2006	27.906	0.909	j9e014egq	-21.14	17-01-2006	28.953	1.33	-1.047	1.611
j9e015iyq	-21.13	18-01-2006	27.827	0.819	j9e015irq	-20.14	18-01-2006	27.753	0.65	0.074	1.046
j9e016m9q	-20.13	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-19.07	20-01-2006	27.358	0.533	j9e017okq	-18.08	20-01-2006	—	—	—	—
j9e018r9q	-18.13	21-01-2006	—	—	j9e018r2q	-17.15	21-01-2006	28.133	0.76	—	—
j9e019umq	-17.13	22-01-2006	—	—	j9e019ufq	-16.15	22-01-2006	28.333	0.94	—	—
j9e020cdq	-16.07	23-01-2006	—	—	j9e020c6q	-15.08	23-01-2006	—	—	—	—
j9e021f9q	-15.06	24-01-2006	—	—	j9e021f2q	-14.02	24-01-2006	—	—	—	—
j9e022hlq	-14.06	25-01-2006	26.872	0.481	j9e022heq	-13.02	25-01-2006	—	—	—	—
j9e023llq	-13.06	26-01-2006	27.338	0.504	j9e023leq	-12.02	26-01-2006	—	—	—	—
j9e024p5q	-12.12	27-01-2006	—	—	j9e024oyq	-11.09	27-01-2006	—	—	—	—
j9e025sdq	-11.12	28-01-2006	27.632	0.926	j9e025s6q	-10.09	28-01-2006	28.753	1.13	-1.121	1.461
j9e026vxq	-10.12	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-9.19	30-01-2006	—	—	j9e027beq	-8.22	30-01-2006	27.593	0.55	—	—
j9e028ejq	-8.13	31-01-2006	27.811	0.872	j9e028ecq	-7.09	31-01-2006	—	—	—	—
j9e029h6q	-7.21	01-02-2006	—	—	j9e029gzq	-6.22	01-02-2006	27.003	0.37	—	—
j9e030khq	-6.21	02-02-2006	—	—	j9e030kaq	-5.22	02-02-2006	—	—	—	—
j9e031ndq	-5.27	03-02-2006	—	—	j9e031n6q	-4.27	03-02-2006	—	—	—	—
j9e032pxq	-4.33	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-3.53	05-02-2006	—	—	j9e033sfq	-2.54	05-02-2006	29.153	1.65	—	—
j9e034w9q	-1.74	05-02-2006	25.406	0.102	—	—	—	—	—	—	—
j9e035bkq	-0.82	06-02-2006	23.580	0.027	j9e035bdq	-0.82	06-02-2006	23.293	0.02	0.287	0.034
j9e036dbq	0.00	07-02-2006	22.888	0.015	j9e036d4q	0.04	07-02-2006	22.813	0.02	0.075	0.025
j9e037gnq	0.84	08-02-2006	23.184	0.016	j9e037ggq	0.85	08-02-2006	22.703	0.01	0.481	0.019
j9e038k1q	1.65	09-02-2006	23.538	0.021	j9e038juq	1.65	09-02-2006	22.983	0.01	0.555	0.023
j9e039m9q	2.46	10-02-2006	—	—	j9e039m2q	2.45	10-02-2006	23.043	0.02	—	—
j9e040q6q	3.31	10-02-2006	23.911	0.028	j9e040pzq	3.31	10-02-2006	23.323	0.02	0.588	0.034
j9e041rwq	4.11	11-02-2006	24.004	0.031	—	—	—	—	—	—	—
j9e042u8q	4.93	12-02-2006	24.328	0.046	j9e042u1q	4.97	12-02-2006	23.853	0.03	0.475	0.055
j9e043dmq	5.78	13-02-2006	24.325	0.040	j9e043dfq	5.78	13-02-2006	23.883	0.03	0.442	0.050
j9e044h0q	6.58	14-02-2006	24.557	0.053	j9e044gtq	6.58	14-02-2006	24.073	0.03	0.484	0.061
j9e045j6q	7.39	15-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e046moq	8.19	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	8.99	16-02-2006	—	—	j9e047ogq	8.99	16-02-2006	24.383	0.05	—	—
j9e068qxq	9.79	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	10.59	18-02-2006	25.300	0.100	j9e073t8q	10.59	18-02-2006	24.753	0.06	0.547	0.117
j9e076v4q	11.53	19-02-2006	25.253	0.095	j9e076uxq	11.56	19-02-2006	25.373	0.11	-0.120	0.145
j9e086aoq	12.52	20-02-2006	25.088	0.079	j9e086ahq	12.56	20-02-2006	24.933	0.08	0.155	0.112
j9e092e9q	13.39	21-02-2006	25.252	0.088	j9e092e2q	13.43	20-02-2006	25.083	0.08	0.169	0.119
j9e048fzq	13.98	21-02-2006	25.363	0.107	—	—	—	—	—	—	—
j9e094giq	14.23	21-02-2006	25.471	0.135	—	—	—	—	—	—	—
j9e049wmq	19.05	26-02-2006	26.038	0.179	j9e049wfq	19.09	26-02-2006	25.693	0.13	0.345	0.221
j9e0a1bhq	19.89	27-02-2006	25.647	0.112	j9e0a6fzq	19.89	01-03-2006	25.633	0.13	0.014	0.172
j9e0a5drq	20.71	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	21.50	01-03-2006	—	—	j9e0b8jvq	21.50	02-03-2006	25.863	0.16	—	—
j9e0b8k2q	22.52	02-03-2006	25.839	0.136	j9e0a8otq	22.55	03-03-2006	25.563	0.11	0.276	0.175
j9e0a8p0q	23.63	03-03-2006	26.952	0.377	j9e050tqq	23.62	04-03-2006	25.953	0.15	0.999	0.406
j9e050txq	24.96	04-03-2006	26.107	0.188	j9e0c4cbq	24.96	05-03-2006	25.973	0.16	0.134	0.247
j9e0c4xiq	25.83	05-03-2006	—	—	j9e0a1baq	25.82	27-02-2007	25.893	0.16	—	—
M87 Nova 6											
j9e001zdq	-18.50	24-12-2005	26.474	0.616	j9e001z6q	-18.50	24-12-2005	—	—	—	—
j9e002hggq	-13.56	29-12-2005	—	—	j9e002h9q	-13.52	29-12-2005	—	—	—	—
j9e003d6q	-8.50	03-01-2006	26.108	0.483	j9e003czq	-7.46	03-01-2006	—	—	—	—
j9e004atq	-3.25	08-01-2006	25.775	0.461	j9e004amq	-2.26	08-01-2006	28.493	1.58	-2.718	1.646
j9e005d7q	-2.39	09-01-2006	24.677	0.123	j9e005d0q	-1.39	09-01-2006	24.813	0.12	-0.136	0.172
j9e006j4q	-1.13	10-01-2006	23.641	0.047	j9e006ixq	-0.19	10-01-2006	23.583	0.04	0.058	0.062
j9e007lwq	0.00	11-01-2006	22.989	0.031	j9e007lpq	1.00	11-01-2006	22.843	0.02	0.146	0.037
j9e008orq	0.87	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	1.60	13-01-2006	23.471	0.040	j9e009geq	2.61	13-01-2006	23.003	0.03	0.468	0.050
j9e010sgq	2.41	14-01-2006	23.321	0.038	j9e010s9q	3.41	13-01-2006	22.743	0.02	0.578	0.043
j9e011uaq	3.36	14-01-2006	23.609	0.053	j9e011u3q	4.40	14-01-2006	23.393	0.04	0.216	0.066
j9e012wzq	4.16	15-01-2006	23.874	0.070	j9e012wsq	5.20	15-01-2006	23.443	0.04	0.431	0.081
j9e013ceq	5.00	16-01-2006	—	—	j9e013c7q	6.00	16-01-2006	23.463	0.04	—	—
j9e014enq	5.88	17-01-2006	23.838	0.070	j9e014egq	6.87	17-01-2006	23.543	0.05	0.295	0.086
j9e015iyq	6.88	18-01-2006	23.941	0.065	j9e015irq	7.87	18-01-2006	23.883	0.06	0.058	0.088
j9e016m9q	7.88	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	8.94	20-01-2006	24.067	0.080	j9e017okq	9.93	20-01-2006	23.943	0.06	0.124	0.100
j9e018r9q	9.88	21-01-2006	24.420	0.092	j9e018r2q	10.86	21-01-2006	24.153	0.07	0.267	0.116
j9e019umq	10.88	22-01-2006	24.209	0.084	j9e019ufq	11.86	22-01-2006	24.203	0.07	0.006	0.109
j9e020cdq	11.94	23-01-2006	24.616	0.126	j9e020c6q	12.93	23-01-2006	24.483	0.09	0.133	0.155
j9e021f9q	12.95	24-01-2006	24.942	0.162	j9e021f2q	13.99	24-01-2006	24.813	0.11	0.129	0.196
j9e022hlq	13.95	25-01-2006	25.364	0.220	j9e022heq	14.99	25-01-2006	25.163	0.17	0.201	0.278
j9e023llq	14.95	26-01-2006	24.856	0.148	j9e023leq	15.99	26-01-2006	25.023	0.17	-0.167	0.225
j9e024p5q	15.89	27-01-2006	24.841	0.169	j9e024oyq	16.92	27-01-2006	24.993	0.13	-0.152	0.213
j9e025sdq	16.89	28-01-2006	25.347	0.278	j9e025s6q	17.92	28-01-2006	25.633	0.24	-0.286	0.367
j9e026vxq	17.89	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	18.82	30-01-2006	25.108	0.239	j9e027beq	19.79	30-01-2006	26.073	0.33	-0.965	0.407
j9e028ejq	19.88	31-01-2006	25.491	0.257	j9e028ecq	20.92	31-01-2006	25.743	0.26	-0.252	0.366
j9e029h6q	20.80	01-02-2006	25.125	0.216	j9e029gzq	21.79	01-02-2006	25.313	0.19	-0.188	0.288
j9e030khq	21.80	02-02-2006	—	—	j9e030kaq	22.79	02-02-2006	25.543	0.24	—	—
j9e031ndq	22.74	03-02-2006	26.333	0.571	j9e031n6q	23.74	03-02-2006	27.573	0.92	-1.240	1.083
j9e032pxq	23.68	04-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e033smq	24.48	05-02-2006	25.348	0.241	j9e033sfq	25.47	05-02-2006	25.693	0.28	-0.345	0.369
j9e034w9q	26.27	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	27.19	06-02-2006	25.303	0.243	j9e035bdq	27.19	06-02-2006	25.883	0.29	-0.580	0.378
j9e036dbq	28.01	07-02-2006	25.428	0.316	j9e036d4q	28.05	07-02-2006	27.263	0.86	-1.835	0.916
j9e037gnq	28.85	08-02-2006	25.910	0.385	j9e037ggq	28.86	08-02-2006	26.673	0.50	-0.763	0.631
j9e038k1q	29.66	09-02-2006	25.539	0.275	j9e038juq	29.66	09-02-2006	26.033	0.34	-0.494	0.437
j9e039m9q	30.47	10-02-2006	26.464	0.671	j9e039m2q	30.46	10-02-2006	25.993	0.31	0.471	0.739
j9e040q6q	31.32	10-02-2006	25.637	0.365	j9e040pzq	31.32	10-02-2006	26.753	0.54	-1.116	0.652
j9e041rwq	32.12	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	32.94	12-02-2006	25.758	0.434	j9e042u1q	32.98	12-02-2006	26.063	0.32	-0.305	0.539
j9e043dmq	33.79	13-02-2006	25.129	0.190	j9e043dfq	33.79	13-02-2006	26.593	0.45	-1.464	0.488
j9e044h0q	34.59	14-02-2006	25.950	0.385	j9e044gtq	34.59	14-02-2006	27.443	0.92	-1.493	0.997
j9e045j6q	35.40	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	36.20	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	37.00	16-02-2006	—	—	j9e047ogq	37.00	16-02-2006	27.963	1.17	—	—
j9e068qxq	37.80	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	38.60	18-02-2006	—	—	j9e073t8q	38.60	18-02-2006	—	—	—	—
j9e076v4q	39.54	19-02-2006	25.926	0.555	j9e076uxq	39.57	19-02-2006	—	—	—	—
j9e086aoq	40.53	20-02-2006	25.872	0.515	j9e086ahq	40.57	20-02-2006	27.413	0.92	-1.541	1.054
j9e092e9q	41.40	21-02-2006	25.971	0.372	j9e092e2q	41.44	20-02-2006	26.863	0.62	-0.892	0.723
j9e048fzq	41.99	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	42.24	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	47.06	26-02-2006	26.004	0.528	j9e049wfq	47.10	26-02-2006	27.713	1.02	-1.709	1.149
j9e0a1bhq	47.90	27-02-2006	25.628	0.325	j9e0a6fzq	47.90	01-03-2006	—	—	—	—
j9e0a5drq	48.72	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	49.51	01-03-2006	26.206	0.629	j9e0b8jvq	49.51	02-03-2006	29.113	2.19	-2.907	2.279
j9e0b8k2q	50.53	02-03-2006	25.408	0.283	j9e0a8otq	50.56	03-03-2006	—	—	—	—
j9e0a8p0q	51.64	03-03-2006	26.761	0.681	j9e050tqq	51.63	04-03-2006	—	—	—	—
j9e050txq	52.97	04-03-2006	26.225	0.497	j9e0c4cbq	52.97	05-03-2006	27.483	0.89	-1.258	1.019
j9e0c4xiq	53.84	05-03-2006	26.491	0.726	j9e0a1baq	53.83	27-02-2007	—	—	—	—
M87 Nova 7											
j9e001zdz	-27.44	24-12-2005	—	—	j9e001z6q	-27.44	24-12-2005	26.022	0.47	—	—
j9e002hgq	-22.50	29-12-2005	—	—	j9e002h9q	-22.46	29-12-2005	—	—	—	—
j9e003d6q	-17.44	03-01-2006	—	—	j9e003czq	-16.40	03-01-2006	—	—	—	—
j9e004atq	-12.19	08-01-2006	—	—	j9e004amq	-11.20	08-01-2006	—	—	—	—
j9e005d7q	-11.33	09-01-2006	—	—	j9e005d0q	-10.33	09-01-2006	27.275	1.40	—	—
j9e006j4q	-10.07	10-01-2006	—	—	j9e006ixq	-9.13	10-01-2006	—	—	—	—
j9e007lwq	-8.94	11-01-2006	—	—	j9e007lpq	-7.94	11-01-2006	—	—	—	—
j9e008orq	-8.07	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-7.34	13-01-2006	—	—	j9e009geq	-6.33	13-01-2006	—	—	—	—
j9e010sgq	-6.53	14-01-2006	—	—	j9e010s9q	-5.53	13-01-2006	—	—	—	—
j9e011uaq	-5.58	14-01-2006	—	—	j9e011u3q	-4.54	14-01-2006	—	—	—	—
j9e012wzq	-4.78	15-01-2006	—	—	j9e012wsq	-3.74	15-01-2006	—	—	—	—
j9e013ceq	-3.94	16-01-2006	—	—	j9e013c7q	-2.94	16-01-2006	—	—	—	—
j9e014enq	-3.06	17-01-2006	—	—	j9e014egq	-2.07	17-01-2006	—	—	—	—
j9e015iyq	-2.06	18-01-2006	25.501	0.653	j9e015irq	-1.07	18-01-2006	—	—	—	—
j9e016m9q	-1.06	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	0.00	20-01-2006	23.210	0.086	j9e017okq	0.99	20-01-2006	23.612	0.05	-0.402	0.098
j9e018r9q	0.94	21-01-2006	—	—	j9e018r2q	1.92	21-01-2006	—	—	—	—
j9e019umq	1.94	22-01-2006	23.792	0.150	j9e019ufq	2.92	22-01-2006	23.675	0.05	0.117	0.158

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e020cdq	3.00	23-01-2006	—	—	j9e020c6q	3.99	23-01-2006	—	—	—	—
j9e021f9q	4.01	24-01-2006	23.791	0.148	j9e021f2q	5.05	24-01-2006	24.271	0.10	-0.480	0.176
j9e022hlq	5.01	25-01-2006	—	—	j9e022heq	6.05	25-01-2006	—	—	—	—
j9e023llq	6.01	26-01-2006	24.275	0.236	j9e023leq	7.05	26-01-2006	24.691	0.13	-0.416	0.270
j9e024p5q	6.95	27-01-2006	—	—	j9e024oyq	7.98	27-01-2006	—	—	—	—
j9e025sdq	7.95	28-01-2006	25.345	0.572	j9e025s6q	8.98	28-01-2006	25.195	0.20	0.150	0.605
j9e026vxq	8.95	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	9.88	30-01-2006	25.387	0.654	j9e027beq	10.85	30-01-2006	25.058	0.17	0.329	0.675
j9e028ejq	10.94	31-01-2006	—	—	j9e028ecq	11.98	31-01-2006	—	—	—	—
j9e029h6q	11.86	01-02-2006	24.694	0.346	j9e029gzq	12.85	01-02-2006	25.524	0.25	-0.830	0.424
j9e030khq	12.86	02-02-2006	—	—	j9e030kaq	13.85	02-02-2006	—	—	—	—
j9e031ndq	13.80	03-02-2006	24.990	0.430	j9e031n6q	14.80	03-02-2006	25.710	0.30	-0.720	0.522
j9e032pxq	14.74	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	15.54	05-02-2006	—	—	j9e033sfq	16.53	05-02-2006	26.427	0.63	—	—
j9e034w9q	17.33	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	18.25	06-02-2006	—	—	j9e035bdq	18.25	06-02-2006	26.098	0.41	—	—
j9e036dbq	19.07	07-02-2006	—	—	j9e036d4q	19.11	07-02-2006	—	—	—	—
j9e037gnq	19.91	08-02-2006	25.089	0.459	j9e037ggq	19.92	08-02-2006	26.388	0.64	-1.299	0.786
j9e038k1q	20.72	09-02-2006	—	—	j9e038juq	20.72	09-02-2006	—	—	—	—
j9e039m9q	21.53	10-02-2006	25.116	0.479	j9e039m2q	21.52	10-02-2006	26.933	0.99	-1.817	1.102
j9e040q6q	22.38	10-02-2006	—	—	j9e040pzq	22.38	10-02-2006	—	—	—	—
j9e041rwq	23.18	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	24.00	12-02-2006	—	—	j9e042u1q	24.04	12-02-2006	—	—	—	—
j9e043dmq	24.85	13-02-2006	—	—	j9e043dfq	24.85	13-02-2006	—	—	—	—
j9e044h0q	25.65	14-02-2006	—	—	j9e044gtq	25.65	14-02-2006	—	—	—	—
j9e045j6q	26.46	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	27.26	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	28.06	16-02-2006	—	—	j9e047ogq	28.06	16-02-2006	—	—	—	—
j9e068qxq	28.86	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	29.66	18-02-2006	25.475	0.646	j9e073t8q	29.66	18-02-2006	—	—	—	—
j9e076v4q	30.60	19-02-2006	—	—	j9e076uxq	30.63	19-02-2006	—	—	—	—
j9e086aoq	31.59	20-02-2006	25.660	0.835	j9e086ahq	31.63	20-02-2006	—	—	—	—
j9e092e9q	32.46	21-02-2006	—	—	j9e092e2q	32.50	20-02-2006	—	—	—	—
j9e048fzq	33.05	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	33.30	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	38.12	26-02-2006	—	—	j9e049wfq	38.16	26-02-2006	—	—	—	—
j9e0a1bhq	38.96	27-02-2006	—	—	j9e0a6fzq	38.96	01-03-2006	—	—	—	—
j9e0a5drq	39.78	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	40.57	01-03-2006	—	—	j9e0b8jvq	40.57	02-03-2006	—	—	—	—
j9e0b8k2q	41.59	02-03-2006	—	—	j9e0a8otq	41.62	03-03-2006	—	—	—	—
j9e0a8p0q	42.70	03-03-2006	—	—	j9e050tqq	42.69	04-03-2006	—	—	—	—
j9e050txq	44.03	04-03-2006	—	—	j9e0c4cbq	44.03	05-03-2006	—	—	—	—
j9e0c4xiq	44.90	05-03-2006	—	—	j9e0a1baq	44.89	27-02-2007	—	—	—	—
M87 Nova 8											
j9e001zdzq	-70.14	24-12-2005	—	—	j9e001z6q	-70.14	24-12-2005	—	—	—	—
j9e002hgq	-65.20	29-12-2005	—	—	j9e002h9q	-65.16	29-12-2005	—	—	—	—
j9e003d6q	-60.14	03-01-2006	—	—	j9e003czq	-59.10	03-01-2006	—	—	—	—
j9e004atq	-54.89	08-01-2006	—	—	j9e004amq	-53.90	08-01-2006	—	—	—	—
j9e005d7q	-54.03	09-01-2006	—	—	j9e005d0q	-53.03	09-01-2006	—	—	—	—
j9e006j4q	-52.77	10-01-2006	—	—	j9e006ixq	-51.83	10-01-2006	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e007lwq	-51.64	11-01-2006	—	—	j9e007lpq	-50.64	11-01-2006	—	—	—	—
j9e008orq	-50.77	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-50.04	13-01-2006	—	—	j9e009geq	-49.03	13-01-2006	28.783	1.64	—	—
j9e010sgq	-49.23	14-01-2006	—	—	j9e010s9q	-48.23	13-01-2006	—	—	—	—
j9e011uaq	-48.28	14-01-2006	—	—	j9e011u3q	-47.24	14-01-2006	29.923	2.61	—	—
j9e012wzq	-47.48	15-01-2006	—	—	j9e012wsq	-46.44	15-01-2006	—	—	—	—
j9e013ceq	-46.64	16-01-2006	—	—	j9e013c7q	-45.64	16-01-2006	29.433	2.22	—	—
j9e014enq	-45.76	17-01-2006	—	—	j9e014egq	-44.77	17-01-2006	27.103	0.71	—	—
j9e015iyq	-44.76	18-01-2006	—	—	j9e015irq	-43.77	18-01-2006	27.513	0.86	—	—
j9e016m9q	-43.76	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-42.70	20-01-2006	—	—	j9e017okq	-41.71	20-01-2006	26.813	0.57	—	—
j9e018r9q	-41.76	21-01-2006	—	—	j9e018r2q	-40.78	21-01-2006	27.443	0.82	—	—
j9e019umq	-40.76	22-01-2006	—	—	j9e019ufq	-39.78	22-01-2006	26.443	0.39	—	—
j9e020cdq	-39.70	23-01-2006	—	—	j9e020c6q	-38.71	23-01-2006	29.463	2.22	—	—
j9e021f9q	-38.69	24-01-2006	—	—	j9e021f2q	-37.65	24-01-2006	—	—	—	—
j9e022hlq	-37.69	25-01-2006	—	—	j9e022heq	-36.65	25-01-2006	28.243	1.35	—	—
j9e023llq	-36.69	26-01-2006	—	—	j9e023leq	-35.65	26-01-2006	27.393	0.64	—	—
j9e024p5q	-35.75	27-01-2006	—	—	j9e024oyq	-34.72	27-01-2006	26.573	0.42	—	—
j9e025sdq	-34.75	28-01-2006	—	—	j9e025s6q	-33.72	28-01-2006	—	—	—	—
j9e026vxq	-33.75	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-32.82	30-01-2006	—	—	j9e027beq	-31.85	30-01-2006	—	—	—	—
j9e028ejq	-31.76	31-01-2006	—	—	j9e028ecq	-30.72	31-01-2006	27.173	0.64	—	—
j9e029h6q	-30.84	01-02-2006	—	—	j9e029gzq	-29.85	01-02-2006	—	—	—	—
j9e030khq	-29.84	02-02-2006	—	—	j9e030kaq	-28.85	02-02-2006	—	—	—	—
j9e031ndq	-28.90	03-02-2006	—	—	j9e031n6q	-27.90	03-02-2006	28.823	1.71	—	—
j9e032pxq	-27.96	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-27.16	05-02-2006	—	—	j9e033sfq	-26.17	05-02-2006	31.803	4.46	—	—
j9e034w9q	-25.37	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-24.45	06-02-2006	—	—	j9e035bdq	-24.45	06-02-2006	—	—	—	—
j9e036dbq	-23.63	07-02-2006	—	—	j9e036d4q	-23.59	07-02-2006	29.113	1.94	—	—
j9e037gnq	-22.79	08-02-2006	—	—	j9e037ggq	-22.78	08-02-2006	—	—	—	—
j9e038k1q	-21.98	09-02-2006	—	—	j9e038juq	-21.98	09-02-2006	—	—	—	—
j9e039m9q	-21.17	10-02-2006	—	—	j9e039m2q	-21.18	10-02-2006	27.373	0.71	—	—
j9e040q6q	-20.32	10-02-2006	—	—	j9e040pzq	-20.32	10-02-2006	—	—	—	—
j9e041rwq	-19.52	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	-18.70	12-02-2006	—	—	j9e042u1q	-18.66	12-02-2006	—	—	—	—
j9e043dmq	-17.85	13-02-2006	—	—	j9e043dfq	-17.85	13-02-2006	—	—	—	—
j9e044h0q	-17.05	14-02-2006	—	—	j9e044gtq	-17.05	14-02-2006	—	—	—	—
j9e045j6q	-16.24	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-15.44	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	-14.64	16-02-2006	—	—	j9e047ogq	-14.64	16-02-2006	27.313	0.83	—	—
j9e068qxq	-13.84	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	-13.04	18-02-2006	—	—	j9e073t8q	-13.04	18-02-2006	—	—	—	—
j9e076v4q	-12.10	19-02-2006	—	—	j9e076uxq	-12.07	19-02-2006	—	—	—	—
j9e086aoq	-11.11	20-02-2006	—	—	j9e086ahq	-11.07	20-02-2006	27.793	0.93	—	—
j9e092e9q	-10.24	21-02-2006	—	—	j9e092e2q	-10.20	20-02-2006	—	—	—	—
j9e048fzq	-9.65	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	-9.40	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	-4.58	26-02-2006	—	—	j9e049wfq	-4.54	26-02-2006	—	—	—	—
j9e0a1bhq	-3.74	27-02-2006	26.736	0.577	j9e0a6fzq	-3.74	01-03-2006	25.683	0.20	1.053	0.611

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e0a5drq	-2.92	28-02-2006	—	—	—	—	—	23.583	0.04	—	—
j9e0a6g6q	-2.13	01-03-2006	23.840	0.052	j9e0b8jvq	-2.13	02-03-2006	—	—	—	—
j9e0b8k2q	-1.11	02-03-2006	23.513	0.030	j9e0a8otq	-1.08	03-03-2006	23.003	0.02	0.510	0.036
j9e0a8p0q	0.00	03-03-2006	23.372	0.027	j9e050tqq	-0.01	04-03-2006	22.953	0.02	0.419	0.034
j9e050txq	1.33	04-03-2006	24.447	0.082	j9e0c4cbq	1.33	05-03-2006	23.733	0.04	0.714	0.091
j9e0c4xiq	2.20	05-03-2006	24.292	0.072	j9e0a1baq	2.19	27-02-2007	23.823	0.04	0.469	0.082
M87 Nova 9											
j9e001zdq	0.00	24-12-2005	23.424	0.038	j9e001z6q	0.00	24-12-2005	24.967	0.11	-1.543	0.120
j9e002hgq	4.94	29-12-2005	24.881	0.141	j9e002h9q	4.98	29-12-2005	25.273	0.12	-0.392	0.183
j9e003d6q	10.00	03-01-2006	24.857	0.127	j9e003czq	11.04	03-01-2006	25.405	0.15	-0.548	0.193
j9e004atq	15.25	08-01-2006	25.426	0.180	j9e004amq	16.24	08-01-2006	28.870	3.52	-3.444	3.528
j9e005d7q	16.11	09-01-2006	25.205	0.146	j9e005d0q	17.11	09-01-2006	26.592	0.44	-1.387	0.460
j9e006j4q	17.37	10-01-2006	26.093	0.433	j9e006ixq	18.31	10-01-2006	25.717	0.23	0.376	0.489
j9e007lwq	18.50	11-01-2006	25.358	0.177	j9e007lpq	19.50	11-01-2006	26.057	0.30	-0.699	0.349
j9e008orq	19.37	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	20.10	13-01-2006	25.307	0.163	j9e009geq	21.11	13-01-2006	26.716	0.51	-1.409	0.535
j9e010sgq	20.91	14-01-2006	25.550	0.260	j9e010s9q	21.91	13-01-2006	25.952	0.22	-0.402	0.341
j9e011uaq	21.86	14-01-2006	25.158	0.154	j9e011u3q	22.90	14-01-2006	26.136	0.26	-0.978	0.300
j9e012wzq	22.66	15-01-2006	25.533	0.227	j9e012wsq	23.70	15-01-2006	—	—	—	—
j9e013ceq	23.50	16-01-2006	—	—	j9e013c7q	24.50	16-01-2006	26.618	0.46	—	—
j9e014enq	24.38	17-01-2006	25.558	0.158	j9e014egq	25.37	17-01-2006	27.951	1.53	-2.393	1.536
j9e015iyq	25.38	18-01-2006	25.189	0.174	j9e015irq	26.37	18-01-2006	—	—	—	—
j9e016m9q	26.38	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	27.44	20-01-2006	25.473	0.162	j9e017okq	28.43	20-01-2006	27.187	0.81	-1.714	0.828
j9e018r9q	28.38	21-01-2006	25.464	0.209	j9e018r2q	29.36	21-01-2006	28.246	2.00	-2.782	2.012
j9e019umq	29.38	22-01-2006	25.647	0.221	j9e019ufq	30.36	22-01-2006	—	—	—	—
j9e020cdq	30.44	23-01-2006	25.788	0.342	j9e020c6q	31.43	23-01-2006	26.297	0.40	-0.509	0.522
j9e021f9q	31.45	24-01-2006	25.674	0.264	j9e021f2q	32.49	24-01-2006	26.634	0.41	-0.960	0.490
j9e022hlq	32.45	25-01-2006	—	—	j9e022heq	33.49	25-01-2006	28.728	3.57	—	—
j9e023llq	33.45	26-01-2006	26.124	0.437	j9e023leq	34.49	26-01-2006	27.292	0.86	-1.168	0.960
j9e024p5q	34.39	27-01-2006	26.152	0.436	j9e024oyq	35.42	27-01-2006	29.859	8.63	-3.707	8.638
j9e025sdq	35.39	28-01-2006	25.616	0.197	j9e025s6q	36.42	28-01-2006	27.881	1.42	-2.265	1.430
j9e026vxq	36.39	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	37.32	30-01-2006	25.441	0.188	j9e027beq	38.29	30-01-2006	26.818	0.53	-1.377	0.566
j9e028ejq	38.38	31-01-2006	25.352	0.200	j9e028ecq	39.42	31-01-2006	28.275	2.21	-2.923	2.215
j9e029h6q	39.30	01-02-2006	26.491	0.532	j9e029gzq	40.29	01-02-2006	—	—	—	—
j9e030khq	40.30	02-02-2006	25.750	0.313	j9e030kaq	41.29	02-02-2006	—	—	—	—
j9e031ndq	41.24	03-02-2006	26.649	0.614	j9e031n6q	42.24	03-02-2006	26.917	0.53	-0.268	0.814
j9e032pxq	42.18	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	42.98	05-02-2006	25.871	0.291	j9e033sfq	43.97	05-02-2006	—	—	—	—
j9e034w9q	44.77	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	45.69	06-02-2006	25.744	0.186	j9e035bdq	45.69	06-02-2006	28.983	3.88	-3.239	3.881
j9e036dbq	46.51	07-02-2006	25.698	0.279	j9e036d4q	46.55	07-02-2006	—	—	—	—
j9e037gnq	47.35	08-02-2006	25.769	0.235	j9e037ggq	47.36	08-02-2006	27.804	1.26	-2.035	1.281
j9e038klq	48.16	09-02-2006	—	—	j9e038juq	48.16	09-02-2006	26.345	0.32	—	—
j9e039m9q	48.97	10-02-2006	—	—	j9e039m2q	48.96	10-02-2006	27.835	1.29	—	—
j9e040q6q	49.82	10-02-2006	25.682	0.291	j9e040pzq	49.82	10-02-2006	26.838	0.52	-1.156	0.596
j9e041rwq	50.62	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	51.44	12-02-2006	26.451	0.532	j9e042u1q	51.48	12-02-2006	26.917	0.60	-0.466	0.799
j9e043dmq	52.29	13-02-2006	25.782	0.254	j9e043dfq	52.29	13-02-2006	27.158	0.68	-1.376	0.727

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e044h0q	53.09	14-02-2006	26.126	0.400	j9e044gtq	53.09	14-02-2006	—	—	—	—
j9e045j6q	53.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	54.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	55.50	16-02-2006	26.486	0.531	j9e047ogq	55.50	16-02-2006	27.185	0.65	-0.699	0.839
j9e068qxq	56.30	17-02-2006	26.025	0.357	—	—	—	—	—	—	—
j9e073tfq	57.10	18-02-2006	—	—	j9e073t8q	57.10	18-02-2006	26.059	0.26	-0.034	0.442
j9e076v4q	58.04	19-02-2006	25.998	0.341	j9e076uxq	58.07	19-02-2006	26.259	0.35	—	—
j9e086aoq	59.03	20-02-2006	26.263	0.452	j9e086ahq	59.07	20-02-2006	26.421	0.41	-0.423	0.531
j9e092e9q	59.90	21-02-2006	—	—	j9e092e2q	59.94	20-02-2006	—	—	—	—
j9e048fzq	60.49	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	60.74	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	65.56	26-02-2006	26.520	0.605	j9e049wfq	65.60	26-02-2006	—	—	—	—
j9e0a1bhq	66.40	27-02-2006	—	—	j9e0a6fzq	66.40	01-03-2006	—	—	—	—
j9e0a5drq	67.22	28-02-2006	25.882	0.393	—	—	—	—	—	—	—
j9e0a6g6q	68.01	01-03-2006	25.823	0.260	j9e0b8jvq	68.01	02-03-2006	27.954	1.33	-2.072	1.386
j9e0b8k2q	69.03	02-03-2006	—	—	j9e0a8otq	69.06	03-03-2006	—	—	—	—
j9e0a8p0q	70.14	03-03-2006	26.243	0.431	j9e050tqq	70.13	04-03-2006	—	—	—	—
j9e050txq	71.47	04-03-2006	—	—	j9e0c4cbq	71.47	05-03-2006	—	—	—	—
j9e0c4xiq	72.34	05-03-2006	—	—	j9e0a1baq	72.33	27-02-2007	—	—	—	—
M87 Nova 10											
j9e001zdq	-31.45	24-12-2005	—	—	j9e001z6q	-31.45	24-12-2005	—	—	—	—
j9e002hgq	-26.51	29-12-2005	26.078	0.367	j9e002h9q	-26.47	29-12-2005	28.66	1.59	-2.585	1.632
j9e003d6q	-21.45	03-01-2006	—	—	j9e003czq	-20.41	03-01-2006	—	—	—	—
j9e004atq	-16.20	08-01-2006	—	—	j9e004amq	-15.21	08-01-2006	—	—	—	—
j9e005d7q	-15.34	09-01-2006	—	—	j9e005d0q	-14.34	09-01-2006	—	—	—	—
j9e006j4q	-14.08	10-01-2006	26.695	0.866	j9e006ixq	-13.14	10-01-2006	—	—	—	—
j9e007lwq	-12.95	11-01-2006	26.440	0.497	j9e007lpq	-11.95	11-01-2006	—	—	—	—
j9e008orq	-12.08	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-11.35	13-01-2006	26.432	0.524	j9e009geq	-10.34	13-01-2006	—	—	—	—
j9e010sgq	-10.54	14-01-2006	—	—	j9e010s9q	-9.54	13-01-2006	—	—	—	—
j9e011uaq	-9.59	14-01-2006	—	—	j9e011u3q	-8.55	14-01-2006	—	—	—	—
j9e012wzq	-8.79	15-01-2006	—	—	j9e012wsq	-7.75	15-01-2006	—	—	—	—
j9e013ceq	-7.95	16-01-2006	—	—	j9e013c7q	-6.95	16-01-2006	—	—	—	—
j9e014enq	-7.07	17-01-2006	26.571	0.642	j9e014egq	-6.08	17-01-2006	—	—	—	—
j9e015iyq	-6.07	18-01-2006	—	—	j9e015irq	-5.08	18-01-2006	—	—	—	—
j9e016m9q	-5.07	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-4.01	20-01-2006	25.437	0.232	j9e017okq	-3.02	20-01-2006	25.96	0.28	-0.526	0.364
j9e018r9q	-3.07	21-01-2006	25.107	0.182	j9e018r2q	-2.09	21-01-2006	25.28	0.18	-0.176	0.256
j9e019umq	-2.07	22-01-2006	—	—	j9e019ufq	-1.09	22-01-2006	24.61	0.09	—	—
j9e020cdq	-1.01	23-01-2006	24.284	0.096	j9e020c6q	-0.02	23-01-2006	23.78	0.05	0.501	0.108
j9e021f9q	0.00	24-01-2006	23.507	0.040	j9e021f2q	1.04	24-01-2006	23.27	0.03	0.234	0.05
j9e022hlq	1.00	25-01-2006	24.082	0.076	j9e022heq	2.04	25-01-2006	23.72	0.05	0.359	0.091
j9e023llq	2.00	26-01-2006	24.958	0.147	j9e023leq	3.04	26-01-2006	24.30	0.08	0.655	0.167
j9e024p5q	2.94	27-01-2006	24.626	0.109	j9e024oyq	3.97	27-01-2006	24.32	0.06	0.303	0.124
j9e025sdq	3.94	28-01-2006	24.225	0.080	j9e025s6q	4.97	28-01-2006	23.99	0.06	0.232	0.1
j9e026vxq	4.94	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	5.87	30-01-2006	24.368	0.094	j9e027beq	6.84	30-01-2006	23.92	0.05	0.445	0.106
j9e028ejq	6.93	31-01-2006	24.102	0.078	j9e028ecq	7.97	31-01-2006	23.73	0.04	0.369	0.088
j9e029h6q	7.85	01-02-2006	24.185	0.073	j9e029gzq	8.84	01-02-2006	23.78	0.05	0.402	0.088
j9e030khq	8.85	02-02-2006	25.057	0.199	j9e030kaq	9.84	02-02-2006	24.58	0.08	0.474	0.214

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e031ndq	9.79	03-02-2006	25.224	0.197	j9e031n6q	10.79	03-02-2006	25.08	0.14	0.141	0.242
j9e032pxq	10.73	04-02-2006	24.840	0.095	—	—	—	—	—	—	—
j9e033smq	11.53	05-02-2006	—	—	j9e033sfq	12.52	05-02-2006	25.26	0.17	—	—
j9e034w9q	13.32	05-02-2006	25.045	0.142	—	—	—	—	—	—	—
j9e035bkq	14.24	06-02-2006	25.050	0.151	j9e035bdq	14.24	06-02-2006	25.04	0.13	0.007	0.199
j9e036dbq	15.06	07-02-2006	—	—	j9e036d4q	15.10	07-02-2006	25.09	0.14	—	—
j9e037gnq	15.90	08-02-2006	24.928	0.147	j9e037ggq	15.91	08-02-2006	25.01	0.15	-0.085	0.21
j9e038klq	16.71	09-02-2006	25.250	0.217	j9e038juq	16.71	09-02-2006	24.94	0.12	0.307	0.248
j9e039m9q	17.52	10-02-2006	25.117	0.146	j9e039m2q	17.51	10-02-2006	24.79	0.09	0.324	0.172
j9e040q6q	18.37	10-02-2006	25.946	0.394	j9e040pzq	18.37	10-02-2006	25.20	0.15	0.743	0.422
j9e041rwq	19.17	11-02-2006	25.896	0.356	—	—	—	—	—	—	—
j9e042u8q	19.99	12-02-2006	—	—	j9e042u1q	20.03	12-02-2006	25.03	0.13	—	—
j9e043dmq	20.84	13-02-2006	25.718	0.365	j9e043dfq	20.84	13-02-2006	25.39	0.21	0.325	0.421
j9e044h0q	21.64	14-02-2006	25.987	0.474	j9e044gtq	21.64	14-02-2006	25.66	0.23	0.324	0.527
j9e045j6q	22.45	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	23.25	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	24.05	16-02-2006	24.965	0.142	j9e047ogq	24.05	16-02-2006	25.33	0.18	-0.368	0.229
j9e068qxq	24.85	17-02-2006	25.490	0.260	—	—	—	—	—	—	—
j9e073tfq	25.65	18-02-2006	25.418	0.176	j9e073t8q	25.65	18-02-2006	25.77	0.23	-0.355	0.29
j9e076v4q	26.59	19-02-2006	—	—	j9e076uxq	26.62	19-02-2006	26.48	0.45	—	—
j9e086aoq	27.58	20-02-2006	25.760	0.299	j9e086ahq	27.62	20-02-2006	26.40	0.44	-0.643	0.532
j9e092e9q	28.45	21-02-2006	25.757	0.319	j9e092e2q	28.49	20-02-2006	26.01	0.34	-0.256	0.466
j9e048fzq	29.04	21-02-2006	25.789	0.309	—	—	—	—	—	—	—
j9e094giq	29.29	21-02-2006	25.223	0.163	—	—	—	—	—	—	—
j9e049wmq	34.11	26-02-2006	25.487	0.175	j9e049wfq	34.15	26-02-2006	26.19	0.35	-0.706	0.391
j9e0a1bhq	34.95	27-02-2006	—	—	j9e0a6fzq	34.95	01-03-2006	25.65	0.23	—	—
j9e0a5drq	35.77	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	36.56	01-03-2006	26.474	0.588	j9e0b8jvq	36.56	02-03-2006	—	—	—	—
j9e0b8k2q	37.58	02-03-2006	—	—	j9e0a8otq	37.61	03-03-2006	26.32	0.39	—	—
j9e0a8p0q	38.69	03-03-2006	—	—	j9e050tqq	38.68	04-03-2006	25.96	0.31	—	—
j9e050txq	40.02	04-03-2006	—	—	j9e0c4cbq	40.02	05-03-2006	26.38	0.43	—	—
j9e0c4xiq	40.89	05-03-2006	—	—	j9e0a1baq	40.88	27-02-2007	26.56	0.41	—	—
M87 Nova 11											
j9e001zdq	-41.24	24-12-2005	—	—	j9e001z6q	-41.24	24-12-2005	—	—	—	—
j9e002hgq	-36.30	29-12-2005	—	—	j9e002h9q	-36.26	29-12-2005	27.983	0.71	—	—
j9e003d6q	-31.24	03-01-2006	—	—	j9e003czq	-30.20	03-01-2006	28.193	0.82	—	—
j9e004atq	-25.99	08-01-2006	—	—	j9e004amq	-25.00	08-01-2006	—	—	—	—
j9e005d7q	-25.13	09-01-2006	—	—	j9e005d0q	-24.13	09-01-2006	—	—	—	—
j9e006j4q	-23.87	10-01-2006	—	—	j9e006ixq	-22.93	10-01-2006	27.653	0.59	—	—
j9e007lwq	-22.74	11-01-2006	—	—	j9e007lpq	-21.74	11-01-2006	—	—	—	—
j9e008orq	-21.87	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-21.14	13-01-2006	—	—	j9e009geq	-20.13	13-01-2006	—	—	—	—
j9e010sgq	-20.33	14-01-2006	—	—	j9e010s9q	-19.33	13-01-2006	28.143	0.82	—	—
j9e011uaq	-19.38	14-01-2006	—	—	j9e011u3q	-18.34	14-01-2006	27.833	0.70	—	—
j9e012wzq	-18.58	15-01-2006	—	—	j9e012wsq	-17.54	15-01-2006	—	—	—	—
j9e013ceq	-17.74	16-01-2006	—	—	j9e013c7q	-16.74	16-01-2006	28.603	1.03	—	—
j9e014enq	-16.86	17-01-2006	—	—	j9e014egq	-15.87	17-01-2006	—	—	—	—
j9e015iyq	-15.86	18-01-2006	—	—	j9e015irq	-14.87	18-01-2006	—	—	—	—
j9e016m9q	-14.86	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-13.80	20-01-2006	—	—	j9e017okq	-12.81	20-01-2006	29.423	1.56	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e018r9q	-12.86	21-01-2006	—	—	j9e018r2q	-11.88	21-01-2006	—	—	—	—
j9e019umq	-11.86	22-01-2006	—	—	j9e019ufq	-10.88	22-01-2006	—	—	—	—
j9e020cdq	-10.80	23-01-2006	—	—	j9e020c6q	-9.81	23-01-2006	28.253	0.87	—	—
j9e021f9q	-9.79	24-01-2006	—	—	j9e021f2q	-8.75	24-01-2006	27.943	0.73	—	—
j9e022hlq	-8.79	25-01-2006	—	—	j9e022heq	-7.75	25-01-2006	—	—	—	—
j9e023llq	-7.79	26-01-2006	—	—	j9e023leq	-6.75	26-01-2006	27.453	0.46	—	—
j9e024p5q	-6.85	27-01-2006	—	—	j9e024oyq	-5.82	27-01-2006	—	—	—	—
j9e025sdq	-5.85	28-01-2006	—	—	j9e025s6q	-4.82	28-01-2006	—	—	—	—
j9e026vxq	-4.85	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-3.92	30-01-2006	—	—	j9e027beq	-2.95	30-01-2006	—	—	—	—
j9e028ejq	-2.86	31-01-2006	—	—	j9e028ecq	-1.82	31-01-2006	29.113	1.24	—	—
j9e029h6q	-1.94	01-02-2006	25.420	0.101	j9e029gzq	-0.95	01-02-2006	25.063	0.07	0.357	0.123
j9e030khq	-0.94	02-02-2006	23.949	0.028	j9e030kaq	0.05	02-02-2006	23.723	0.02	0.226	0.034
j9e031ndq	0.00	03-02-2006	23.573	0.021	j9e031n6q	1.00	03-02-2006	23.263	0.02	0.310	0.029
j9e032pxq	0.94	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	1.74	05-02-2006	23.597	0.024	j9e033sfq	2.73	05-02-2006	23.063	0.01	0.534	0.026
j9e034w9q	3.53	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	4.45	06-02-2006	23.604	0.023	j9e035bdq	4.45	06-02-2006	23.033	0.02	0.571	0.030
j9e036dbq	5.27	07-02-2006	—	—	j9e036d4q	5.31	07-02-2006	23.443	0.02	—	—
j9e037gnq	6.11	08-02-2006	23.956	0.027	j9e037ggq	6.12	08-02-2006	23.543	0.02	0.413	0.034
j9e038k1q	6.92	09-02-2006	23.900	0.024	j9e038juq	6.92	09-02-2006	23.423	0.02	0.477	0.031
j9e039m9q	7.73	10-02-2006	24.034	0.029	j9e039m2q	7.72	10-02-2006	23.463	0.02	0.571	0.035
j9e040q6q	8.58	10-02-2006	23.850	0.027	j9e040pzq	8.58	10-02-2006	23.353	0.02	0.497	0.034
j9e041rwq	9.38	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	10.20	12-02-2006	24.411	0.038	j9e042u1q	10.24	12-02-2006	23.873	0.03	0.538	0.048
j9e043dmq	11.05	13-02-2006	24.423	0.041	j9e043dfq	11.05	13-02-2006	23.913	0.03	0.510	0.051
j9e044h0q	11.85	14-02-2006	24.748	0.054	j9e044gtq	11.85	14-02-2006	24.163	0.03	0.585	0.062
j9e045j6q	12.66	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	13.46	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	14.26	16-02-2006	24.529	0.045	j9e047ogq	14.26	16-02-2006	24.103	0.03	0.426	0.054
j9e068qxq	15.06	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	15.86	18-02-2006	24.765	0.055	j9e073t8q	15.86	18-02-2006	24.383	0.05	0.382	0.074
j9e076v4q	16.80	19-02-2006	25.010	0.066	j9e076uxq	16.83	19-02-2006	24.743	0.06	0.267	0.089
j9e086aoq	17.79	20-02-2006	24.846	0.055	j9e086ahq	17.83	20-02-2006	24.513	0.04	0.333	0.068
j9e092e9q	18.66	21-02-2006	25.119	0.065	j9e092e2q	18.70	20-02-2006	24.613	0.04	0.506	0.076
j9e048fzq	19.25	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	19.50	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	24.32	26-02-2006	25.239	0.080	j9e049wfq	24.36	26-02-2006	25.023	0.06	0.216	0.100
j9e0a1bhq	25.16	27-02-2006	25.128	0.060	j9e0a6fzq	25.16	01-03-2006	24.733	0.05	0.395	0.078
j9e0a5drq	25.98	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	26.77	01-03-2006	25.204	0.086	j9e0b8jvq	26.77	02-03-2006	24.853	0.06	0.351	0.105
j9e0b8k2q	27.79	02-03-2006	—	—	j9e0a8otq	27.82	03-03-2006	24.603	0.05	—	—
j9e0a8p0q	28.90	03-03-2006	25.437	0.085	j9e050tqq	28.89	04-03-2006	24.953	0.07	0.484	0.110
j9e050txq	30.23	04-03-2006	25.506	0.100	j9e0c4cbq	30.23	05-03-2006	25.023	0.07	0.483	0.122
j9e0c4xiq	31.10	05-03-2006	25.694	0.099	j9e0a1baq	31.09	27-02-2007	25.253	0.09	0.441	0.134
M87 Nova 12											
j9e001zdq	-18.50	24-12-2005	—	—	j9e001z6q	-18.50	24-12-2005	—	—	—	—
j9e002hgq	-13.56	29-12-2005	27.542	0.377	j9e002h9q	-13.52	29-12-2005	30.673	2.29	-3.131	2.321
j9e003d6q	-8.50	03-01-2006	27.048	0.241	j9e003czq	-7.46	03-01-2006	28.743	0.86	-1.695	0.893
j9e004atq	-3.25	08-01-2006	27.428	0.309	j9e004amq	-2.26	08-01-2006	28.953	0.96	-1.525	1.009

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e005d7q	-2.39	09-01-2006	26.483	0.143	j9e005d0q	-1.39	09-01-2006	26.173	0.15	0.310	0.207
j9e006j4q	-1.13	10-01-2006	24.498	0.030	j9e006ixq	-0.19	10-01-2006	24.353	0.03	0.145	0.042
j9e007lwq	0.00	11-01-2006	23.577	0.018	j9e007lpq	1.00	11-01-2006	23.283	0.02	0.294	0.027
j9e008orq	0.87	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	1.60	13-01-2006	24.223	0.029	j9e009geq	2.61	13-01-2006	23.513	0.02	0.710	0.035
j9e010sgq	2.41	14-01-2006	23.668	0.019	j9e010s9q	3.41	13-01-2006	23.173	0.02	0.495	0.028
j9e011uaq	3.36	14-01-2006	24.289	0.028	j9e011u3q	4.40	14-01-2006	23.743	0.02	0.546	0.034
j9e012wzq	4.16	15-01-2006	24.596	0.036	j9e012wsq	5.20	15-01-2006	24.323	0.03	0.273	0.047
j9e013ceq	5.00	16-01-2006	—	—	j9e013c7q	6.00	16-01-2006	24.183	0.03	—	—
j9e014enq	5.88	17-01-2006	24.317	0.030	j9e014egq	6.87	17-01-2006	23.673	0.02	0.644	0.036
j9e015iyq	6.88	18-01-2006	24.502	0.033	j9e015irq	7.87	18-01-2006	24.043	0.03	0.459	0.045
j9e016m9q	7.88	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	8.94	20-01-2006	24.763	0.038	j9e017okq	9.93	20-01-2006	24.463	0.04	0.300	0.055
j9e018r9q	9.88	21-01-2006	24.848	0.043	j9e018r2q	10.86	21-01-2006	24.543	0.04	0.305	0.059
j9e019umq	10.88	22-01-2006	24.720	0.037	j9e019ufq	11.86	22-01-2006	24.443	0.03	0.277	0.048
j9e020cdq	11.94	23-01-2006	24.760	0.040	j9e020c6q	12.93	23-01-2006	24.593	0.04	0.167	0.057
j9e021f9q	12.95	24-01-2006	24.878	0.046	j9e021f2q	13.99	24-01-2006	24.583	0.04	0.295	0.061
j9e022hlq	13.95	25-01-2006	24.858	0.037	j9e022heq	14.99	25-01-2006	24.863	0.05	-0.005	0.062
j9e023llq	14.95	26-01-2006	24.961	0.043	j9e023leq	15.99	26-01-2006	24.943	0.06	0.018	0.074
j9e024p5q	15.89	27-01-2006	25.042	0.048	j9e024oyq	16.92	27-01-2006	24.903	0.05	0.139	0.069
j9e025sdq	16.89	28-01-2006	25.151	0.052	j9e025s6q	17.92	28-01-2006	25.023	0.05	0.128	0.072
j9e026vxq	17.89	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	18.82	30-01-2006	25.268	0.059	j9e027beq	19.79	30-01-2006	25.163	0.06	0.105	0.084
j9e028ejq	19.88	31-01-2006	25.350	0.058	j9e028ecq	20.92	31-01-2006	25.323	0.07	0.027	0.091
j9e029h6q	20.80	01-02-2006	25.223	0.050	j9e029gzq	21.79	01-02-2006	25.433	0.10	-0.210	0.112
j9e030khq	21.80	02-02-2006	—	—	j9e030kaq	22.79	02-02-2006	25.163	0.06	—	—
j9e031ndq	22.74	03-02-2006	25.420	0.070	j9e031n6q	23.74	03-02-2006	25.323	0.07	0.097	0.099
j9e032pxq	23.68	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	24.48	05-02-2006	25.292	0.068	j9e033sfq	25.47	05-02-2006	25.373	0.09	-0.081	0.113
j9e034w9q	26.27	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	27.19	06-02-2006	25.307	0.068	j9e035bdq	27.19	06-02-2006	25.073	0.06	0.234	0.091
j9e036dbq	28.01	07-02-2006	25.008	0.045	j9e036d4q	28.05	07-02-2006	25.023	0.06	-0.015	0.075
j9e037gnq	28.85	08-02-2006	24.917	0.043	j9e037ggq	28.86	08-02-2006	24.833	0.06	0.084	0.074
j9e038k1q	29.66	09-02-2006	24.928	0.043	j9e038juq	29.66	09-02-2006	24.863	0.05	0.065	0.066
j9e039m9q	30.47	10-02-2006	25.086	0.049	j9e039m2q	30.46	10-02-2006	25.143	0.06	-0.057	0.077
j9e040q6q	31.32	10-02-2006	25.450	0.068	j9e040pzq	31.32	10-02-2006	25.273	0.08	0.177	0.105
j9e041rwq	32.12	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	32.94	12-02-2006	—	—	j9e042u1q	32.98	12-02-2006	25.913	0.11	—	—
j9e043dmq	33.79	13-02-2006	25.625	0.089	j9e043dfq	33.79	13-02-2006	25.463	0.08	0.162	0.120
j9e044h0q	34.59	14-02-2006	25.612	0.070	j9e044gtq	34.59	14-02-2006	25.763	0.11	-0.151	0.130
j9e045j6q	35.40	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	36.20	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	37.00	16-02-2006	26.024	0.106	j9e047ogq	37.00	16-02-2006	26.173	0.16	-0.149	0.192
j9e068qxq	37.80	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	38.60	18-02-2006	26.178	0.117	j9e073t8q	38.60	18-02-2006	26.223	0.16	-0.045	0.198
j9e076v4q	39.54	19-02-2006	26.218	0.172	j9e076uxq	39.57	19-02-2006	27.083	0.33	-0.865	0.372
j9e086aoq	40.53	20-02-2006	26.389	0.150	j9e086ahq	40.57	20-02-2006	26.663	0.23	-0.274	0.275
j9e092e9q	41.40	21-02-2006	26.091	0.108	j9e092e2q	41.44	20-02-2006	26.373	0.18	-0.282	0.210
j9e048fzq	41.99	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	42.24	21-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e049wmq	47.06	26-02-2006	25.970	0.107	j9e049wfq	47.10	26-02-2006	26.093	0.14	-0.123	0.176
j9e0a1bhq	47.90	27-02-2006	25.839	0.100	j9e0a6fzq	47.90	01-03-2006	25.653	0.10	0.186	0.141
j9e0a5drq	48.72	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	49.51	01-03-2006	26.264	0.137	j9e0b8jvq	49.51	02-03-2006	25.943	0.13	0.321	0.189
j9e0b8k2q	50.53	02-03-2006	25.811	0.095	j9e0a8otq	50.56	03-03-2006	25.993	0.15	-0.182	0.178
j9e0a8p0q	51.64	03-03-2006	25.949	0.074	j9e050tqq	51.63	04-03-2006	25.973	0.13	-0.024	0.150
j9e050txq	52.97	04-03-2006	26.047	0.102	j9e0c4cbq	52.97	05-03-2006	26.063	0.13	-0.016	0.165
j9e0c4xiq	53.84	05-03-2006	—	—	j9e0a1baq	53.83	27-02-2007	25.513	0.08	—	—
M87 Nova 13											
j9e001zdq	-69.03	24-12-2005	—	—	j9e001z6q	-69.03	24-12-2005	28.953	1.15	—	—
j9e002hgq	-64.09	29-12-2005	—	—	j9e002h9q	-64.05	29-12-2005	—	—	—	—
j9e003d6q	-59.03	03-01-2006	—	—	j9e003czq	-57.99	03-01-2006	—	—	—	—
j9e004atq	-53.78	08-01-2006	—	—	j9e004amq	-52.79	08-01-2006	30.053	1.87	—	—
j9e005d7q	-52.92	09-01-2006	—	—	j9e005d0q	-51.92	09-01-2006	29.573	1.44	—	—
j9e006j4q	-51.66	10-01-2006	—	—	j9e006ixq	-50.72	10-01-2006	—	—	—	—
j9e007lwq	-50.53	11-01-2006	—	—	j9e007lpq	-49.53	11-01-2006	—	—	—	—
j9e008orq	-49.66	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-48.93	13-01-2006	—	—	j9e009geq	-47.92	13-01-2006	28.783	0.99	—	—
j9e010sgq	-48.12	14-01-2006	—	—	j9e010s9q	-47.12	13-01-2006	28.593	0.88	—	—
j9e011uaq	-47.17	14-01-2006	—	—	j9e011u3q	-46.13	14-01-2006	27.563	0.40	—	—
j9e012wzq	-46.37	15-01-2006	—	—	j9e012wsq	-45.33	15-01-2006	—	—	—	—
j9e013ceq	-45.53	16-01-2006	—	—	j9e013c7q	-44.53	16-01-2006	—	—	—	—
j9e014enq	-44.65	17-01-2006	—	—	j9e014egq	-43.66	17-01-2006	—	—	—	—
j9e015iyq	-43.65	18-01-2006	—	—	j9e015irq	-42.66	18-01-2006	32.203	3.93	—	—
j9e016m9q	-42.65	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-41.59	20-01-2006	—	—	j9e017okq	-40.60	20-01-2006	—	—	—	—
j9e018r9q	-40.65	21-01-2006	—	—	j9e018r2q	-39.67	21-01-2006	—	—	—	—
j9e019umq	-39.65	22-01-2006	—	—	j9e019ufq	-38.67	22-01-2006	—	—	—	—
j9e020cdq	-38.59	23-01-2006	—	—	j9e020c6q	-37.60	23-01-2006	—	—	—	—
j9e021f9q	-37.58	24-01-2006	—	—	j9e021f2q	-36.54	24-01-2006	27.993	0.57	—	—
j9e022hlq	-36.58	25-01-2006	—	—	j9e022heq	-35.54	25-01-2006	—	—	—	—
j9e023llq	-35.58	26-01-2006	—	—	j9e023leq	-34.54	26-01-2006	27.903	0.49	—	—
j9e024p5q	-34.64	27-01-2006	—	—	j9e024oyq	-33.61	27-01-2006	29.213	1.20	—	—
j9e025sdq	-33.64	28-01-2006	—	—	j9e025s6q	-32.61	28-01-2006	—	—	—	—
j9e026vxq	-32.64	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-31.71	30-01-2006	—	—	j9e027beq	-30.74	30-01-2006	28.493	0.78	—	—
j9e028ejq	-30.65	31-01-2006	—	—	j9e028ecq	-29.61	31-01-2006	—	—	—	—
j9e029h6q	-29.73	01-02-2006	—	—	j9e029gzq	-28.74	01-02-2006	29.703	1.79	—	—
j9e030khq	-28.73	02-02-2006	—	—	j9e030kaq	-27.74	02-02-2006	—	—	—	—
j9e031ndq	-27.79	03-02-2006	—	—	j9e031n6q	-26.79	03-02-2006	28.293	0.70	—	—
j9e032pxq	-26.85	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-26.05	05-02-2006	—	—	j9e033sfq	-25.06	05-02-2006	27.933	0.50	—	—
j9e034w9q	-24.26	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-23.34	06-02-2006	—	—	j9e035bdq	-23.34	06-02-2006	30.243	2.04	—	—
j9e036dbq	-22.52	07-02-2006	—	—	j9e036d4q	-22.48	07-02-2006	28.373	0.76	—	—
j9e037gnq	-21.68	08-02-2006	—	—	j9e037ggq	-21.67	08-02-2006	27.693	0.44	—	—
j9e038k1q	-20.87	09-02-2006	—	—	j9e038juq	-20.87	09-02-2006	—	—	—	—
j9e039m9q	-20.06	10-02-2006	—	—	j9e039m2q	-20.07	10-02-2006	29.393	1.29	—	—
j9e040q6q	-19.21	10-02-2006	—	—	j9e040pzq	-19.21	10-02-2006	28.183	0.63	—	—
j9e041rwq	-18.41	11-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e042u8q	-17.59	12-02-2006	—	—	j9e042u1q	-17.55	12-02-2006	—	—	—	—
j9e043dmq	-16.74	13-02-2006	—	—	j9e043dfq	-16.74	13-02-2006	—	—	—	—
j9e044h0q	-15.94	14-02-2006	—	—	j9e044gtq	-15.94	14-02-2006	27.573	0.38	—	—
j9e045j6q	-15.13	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-14.33	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	-13.53	16-02-2006	—	—	j9e047ogq	-13.53	16-02-2006	—	—	—	—
j9e068qxq	-12.73	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	-11.93	18-02-2006	—	—	j9e073t8q	-11.93	18-02-2006	27.223	0.33	—	—
j9e076v4q	-10.99	19-02-2006	—	—	j9e076uxq	-10.96	19-02-2006	28.453	0.75	—	—
j9e086aoq	-10.00	20-02-2006	—	—	j9e086ahq	-9.96	20-02-2006	28.393	0.72	—	—
j9e092e9q	-9.13	21-02-2006	—	—	j9e092e2q	-9.09	20-02-2006	28.773	0.92	—	—
j9e048fzq	-8.54	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	-8.29	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	-3.47	26-02-2006	—	—	j9e049wfq	-3.43	26-02-2006	—	—	—	—
j9e0a1bhq	-2.63	27-02-2006	—	—	j9e0a6fzq	-2.63	01-03-2006	—	—	—	—
j9e0a5drq	-1.81	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	-1.02	01-03-2006	25.228	0.053	j9e0b8jvq	-1.02	02-03-2006	26.173	0.14	-0.945	0.150
j9e0b8k2q	0.00	02-03-2006	23.670	0.021	j9e0a8otq	0.03	03-03-2006	23.393	0.02	0.277	0.029
j9e0a8p0q	1.11	03-03-2006	24.061	0.024	j9e050tqq	1.10	04-03-2006	23.453	0.02	0.608	0.031
j9e050txq	2.44	04-03-2006	24.514	0.035	j9e0c4cbq	2.44	05-03-2006	23.873	0.02	0.641	0.040
j9e0c4xiq	3.31	05-03-2006	24.589	0.037	j9e0a1baq	3.30	27-02-2007	24.433	0.03	0.156	0.048
M87 Nova 14											
j9e001zdq	-41.24	24-12-2005	—	—	j9e001z6q	-41.24	24-12-2005	29.473	2.23	—	—
j9e002h9q	-36.30	29-12-2005	26.758	0.647	j9e002h9q	-36.26	29-12-2005	—	—	—	—
j9e003d6q	-31.24	03-01-2006	26.024	0.341	j9e003czq	-30.20	03-01-2006	—	—	—	—
j9e004atq	-25.99	08-01-2006	—	—	j9e004amq	-25.00	08-01-2006	—	—	—	—
j9e005d7q	-25.13	09-01-2006	26.429	0.539	j9e005d0q	-24.13	09-01-2006	—	—	—	—
j9e006j4q	-23.87	10-01-2006	—	—	j9e006ixq	-22.93	10-01-2006	—	—	—	—
j9e007lwq	-22.74	11-01-2006	—	—	j9e007lpq	-21.74	11-01-2006	28.173	1.34	—	—
j9e008orq	-21.87	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-21.14	13-01-2006	—	—	j9e009geq	-20.13	13-01-2006	—	—	—	—
j9e010sgq	-20.33	14-01-2006	—	—	j9e010s9q	-19.33	13-01-2006	—	—	—	—
j9e011uaq	-19.38	14-01-2006	26.278	0.482	j9e011u3q	-18.34	14-01-2006	27.173	0.87	-0.895	0.995
j9e012wzq	-18.58	15-01-2006	—	—	j9e012wsq	-17.54	15-01-2006	27.703	0.94	—	—
j9e013ceq	-17.74	16-01-2006	—	—	j9e013c7q	-16.74	16-01-2006	—	—	—	—
j9e014enq	-16.86	17-01-2006	—	—	j9e014egq	-15.87	17-01-2006	—	—	—	—
j9e015iyq	-15.86	18-01-2006	—	—	j9e015irq	-14.87	18-01-2006	29.233	2.07	—	—
j9e016m9q	-14.86	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-13.80	20-01-2006	26.645	0.575	j9e017okq	-12.81	20-01-2006	28.423	1.46	-1.778	1.569
j9e018r9q	-12.86	21-01-2006	26.263	0.487	j9e018r2q	-11.88	21-01-2006	—	—	—	—
j9e019umq	-11.86	22-01-2006	—	—	j9e019ufq	-10.88	22-01-2006	26.883	0.74	—	—
j9e020cdq	-10.80	23-01-2006	—	—	j9e020c6q	-9.81	23-01-2006	27.363	0.86	—	—
j9e021f9q	-9.79	24-01-2006	—	—	j9e021f2q	-8.75	24-01-2006	—	—	—	—
j9e022hlq	-8.79	25-01-2006	—	—	j9e022heq	-7.75	25-01-2006	—	—	—	—
j9e023llq	-7.79	26-01-2006	26.891	0.717	j9e023leq	-6.75	26-01-2006	—	—	—	—
j9e024p5q	-6.85	27-01-2006	26.587	0.515	j9e024oyq	-5.82	27-01-2006	27.483	1.29	-0.896	1.389
j9e025sdq	-5.85	28-01-2006	—	—	j9e025s6q	-4.82	28-01-2006	26.863	0.54	—	—
j9e026vxq	-4.85	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-3.92	30-01-2006	—	—	j9e027beq	-2.95	30-01-2006	—	—	—	—
j9e028ejq	-2.86	31-01-2006	—	—	j9e028ecq	-1.82	31-01-2006	25.783	0.23	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e029h6q	-1.94	01-02-2006	25.193	0.149	j9e029gzq	-0.95	01-02-2006	25.853	0.27	-0.660	0.308
j9e030khq	-0.94	02-02-2006	24.891	0.148	j9e030kaq	0.05	02-02-2006	24.473	0.09	0.418	0.173
j9e031ndq	0.00	03-02-2006	23.742	0.040	j9e031n6q	1.00	03-02-2006	23.763	0.05	-0.021	0.064
j9e032pxq	0.94	04-02-2006	24.053	0.066	—	—	—	—	—	—	—
j9e033smq	1.74	05-02-2006	23.840	0.057	j9e033sfq	2.73	05-02-2006	23.623	0.04	0.217	0.070
j9e034w9q	3.53	05-02-2006	24.017	0.067	—	—	—	—	—	—	—
j9e035bkq	4.45	06-02-2006	24.294	0.098	j9e035bdq	4.45	06-02-2006	23.813	0.04	0.481	0.106
j9e036dbq	5.27	07-02-2006	24.089	0.063	j9e036d4q	5.31	07-02-2006	23.623	0.04	0.466	0.075
j9e037gnq	6.11	08-02-2006	24.093	0.064	j9e037ggq	6.12	08-02-2006	23.793	0.05	0.300	0.081
j9e038k1q	6.92	09-02-2006	24.132	0.058	j9e038juq	6.92	09-02-2006	23.813	0.04	0.319	0.070
j9e039m9q	7.73	10-02-2006	24.244	0.074	j9e039m2q	7.72	10-02-2006	23.873	0.04	0.371	0.084
j9e040q6q	8.58	10-02-2006	24.185	0.058	j9e040pzq	8.58	10-02-2006	24.053	0.05	0.132	0.077
j9e041rwq	9.38	11-02-2006	24.400	0.090	—	—	—	—	—	—	—
j9e042u8q	10.20	12-02-2006	24.321	0.059	j9e042u1q	10.24	12-02-2006	24.283	0.07	0.038	0.092
j9e043dmq	11.05	13-02-2006	24.591	0.114	j9e043dfq	11.05	13-02-2006	24.193	0.06	0.398	0.129
j9e044h0q	11.85	14-02-2006	24.280	0.076	j9e044gtq	11.85	14-02-2006	24.073	0.06	0.207	0.097
j9e045j6q	12.66	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	13.46	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	14.26	16-02-2006	24.621	0.107	j9e047ogq	14.26	16-02-2006	24.123	0.06	0.498	0.123
j9e068qxq	15.06	17-02-2006	24.918	0.108	—	—	—	—	—	—	—
j9e073tfq	15.86	18-02-2006	25.080	0.087	j9e073t8q	15.86	18-02-2006	25.143	0.16	-0.063	0.182
j9e076v4q	16.80	19-02-2006	25.302	0.215	j9e076uxq	16.83	19-02-2006	25.763	0.25	-0.461	0.330
j9e086aoq	17.79	20-02-2006	25.320	0.192	j9e086ahq	17.83	20-02-2006	25.323	0.17	-0.003	0.256
j9e092e9q	18.66	21-02-2006	25.288	0.210	j9e092e2q	18.70	20-02-2006	25.023	0.11	0.265	0.237
j9e048fzq	19.25	21-02-2006	25.135	0.165	—	—	—	—	—	—	—
j9e094giq	19.50	21-02-2006	25.373	0.184	—	—	—	—	—	—	—
j9e049wmq	24.32	26-02-2006	25.303	0.160	j9e049wfq	24.36	26-02-2006	24.923	0.13	0.380	0.206
j9e0a1bhq	25.16	27-02-2006	25.420	0.213	j9e0a6fzq	25.16	01-03-2006	25.293	0.18	0.127	0.279
j9e0a5drq	25.98	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	26.77	01-03-2006	25.032	0.120	j9e0b8jvq	26.77	02-03-2006	24.933	0.14	0.099	0.184
j9e0b8k2q	27.79	02-03-2006	25.057	0.173	j9e0a8otq	27.82	03-03-2006	25.133	0.13	-0.076	0.216
j9e0a8p0q	28.90	03-03-2006	25.047	0.173	j9e050tqq	28.89	04-03-2006	24.903	0.13	0.144	0.216
j9e050txq	30.23	04-03-2006	—	—	j9e0c4cbq	30.23	05-03-2006	25.033	0.14	—	—
j9e0c4xiq	31.10	05-03-2006	25.444	0.190	j9e0a1baq	31.09	27-02-2007	25.133	0.16	0.311	0.248
M87 Nova 15											
j9e001zdq	-42.98	24-12-2005	—	—	j9e001z6q	-42.98	24-12-2005	26.123	0.64	—	—
j9e002hgq	-38.04	29-12-2005	—	—	j9e002h9q	-38.00	29-12-2005	—	—	—	—
j9e003d6q	-32.98	03-01-2006	—	—	j9e003czq	-31.94	03-01-2006	—	—	—	—
j9e004atq	-27.73	08-01-2006	—	—	j9e004amq	-26.74	08-01-2006	25.303	0.77	—	—
j9e005d7q	-26.87	09-01-2006	—	—	j9e005d0q	-25.87	09-01-2006	—	—	—	—
j9e006j4q	-25.61	10-01-2006	—	—	j9e006ixq	-24.67	10-01-2006	—	—	—	—
j9e007lwq	-24.48	11-01-2006	—	—	j9e007lpq	-23.48	11-01-2006	26.043	0.52	—	—
j9e008orq	-23.61	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-22.88	13-01-2006	—	—	j9e009geq	-21.87	13-01-2006	27.453	1.25	—	—
j9e010sgq	-22.07	14-01-2006	—	—	j9e010s9q	-21.07	13-01-2006	28.903	2.51	—	—
j9e011uaq	-21.12	14-01-2006	—	—	j9e011u3q	-20.08	14-01-2006	26.953	0.96	—	—
j9e012wsq	-20.32	15-01-2006	—	—	j9e012wsq	-19.28	15-01-2006	26.833	0.96	—	—
j9e013ceq	-19.48	16-01-2006	—	—	j9e013c7q	-18.48	16-01-2006	—	—	—	—
j9e014enq	-18.60	17-01-2006	—	—	j9e014egq	-17.61	17-01-2006	—	—	—	—
j9e015iyq	-17.60	18-01-2006	—	—	j9e015irq	-16.61	18-01-2006	26.093	0.55	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e016m9q	-16.60	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-15.54	20-01-2006	—	—	j9e017okq	-14.55	20-01-2006	26.983	0.99	—	—
j9e018r9q	-14.60	21-01-2006	—	—	j9e018r2q	-13.62	21-01-2006	26.333	0.64	—	—
j9e019umq	-13.60	22-01-2006	—	—	j9e019ufq	-12.62	22-01-2006	—	—	—	—
j9e020cdq	-12.54	23-01-2006	—	—	j9e020c6q	-11.55	23-01-2006	27.093	0.99	—	—
j9e021f9q	-11.53	24-01-2006	—	—	j9e021f2q	-10.49	24-01-2006	—	—	—	—
j9e022hlq	-10.53	25-01-2006	—	—	j9e022heq	-9.49	25-01-2006	27.213	1.16	—	—
j9e023llq	-9.53	26-01-2006	—	—	j9e023leq	-8.49	26-01-2006	—	—	—	—
j9e024p5q	-8.59	27-01-2006	—	—	j9e024oyq	-7.56	27-01-2006	—	—	—	—
j9e025sdq	-7.59	28-01-2006	—	—	j9e025s6q	-6.56	28-01-2006	—	—	—	—
j9e026vxq	-6.59	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-5.66	30-01-2006	—	—	j9e027beq	-4.69	30-01-2006	—	—	—	—
j9e028ejq	-4.60	31-01-2006	—	—	j9e028ecq	-3.56	31-01-2006	—	—	—	—
j9e029h6q	-3.68	01-02-2006	26.033	1.192	j9e029gzq	-2.69	01-02-2006	—	—	—	—
j9e030khq	-2.68	02-02-2006	24.556	0.267	j9e030kaq	-1.69	02-02-2006	30.723	4.13	-6.167	4.139
j9e031ndq	-1.74	03-02-2006	24.193	0.211	j9e031n6q	-0.74	03-02-2006	28.313	1.85	-4.120	1.862
j9e032pxq	-0.80	04-02-2006	23.833	0.155	—	—	—	—	—	—	—
j9e033smq	0.00	05-02-2006	23.750	0.147	j9e033sfq	0.99	05-02-2006	—	—	—	—
j9e034w9q	1.79	05-02-2006	24.120	0.203	—	—	—	—	—	—	—
j9e035bkq	2.71	06-02-2006	—	—	j9e035bdq	2.71	06-02-2006	—	—	—	—
j9e036dbq	3.53	07-02-2006	24.023	0.181	j9e036d4q	3.57	07-02-2006	—	—	—	—
j9e037gnq	4.37	08-02-2006	24.372	0.253	j9e037ggq	4.38	08-02-2006	26.633	0.74	-2.261	0.782
j9e038k1q	5.18	09-02-2006	24.868	0.421	j9e038juq	5.18	09-02-2006	—	—	—	—
j9e039m9q	5.99	10-02-2006	24.282	0.228	j9e039m2q	5.98	10-02-2006	25.273	0.27	-0.991	0.353
j9e040q6q	6.84	10-02-2006	23.938	0.183	j9e040pzq	6.84	10-02-2006	24.103	0.12	-0.165	0.219
j9e041rwq	7.64	11-02-2006	24.324	0.247	—	—	—	—	—	—	—
j9e042u8q	8.46	12-02-2006	24.657	0.362	j9e042u1q	8.50	12-02-2006	23.313	0.06	1.344	0.367
j9e043dmq	9.31	13-02-2006	24.224	0.176	j9e043dfq	9.31	13-02-2006	23.443	0.07	0.781	0.189
j9e044h0q	10.11	14-02-2006	24.820	0.287	j9e044gtq	10.11	14-02-2006	23.523	0.08	1.297	0.298
j9e045j6q	10.92	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	11.72	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	12.52	16-02-2006	—	—	j9e047ogq	12.52	16-02-2006	24.153	0.12	—	—
j9e068qxq	13.32	17-02-2006	25.229	0.598	—	—	—	—	—	—	—
j9e073tfq	14.12	18-02-2006	25.613	0.844	j9e073t8q	14.12	18-02-2006	24.053	0.10	1.560	0.850
j9e076v4q	15.06	19-02-2006	—	—	j9e076uxq	15.09	19-02-2006	24.553	0.18	—	—
j9e086aoq	16.05	20-02-2006	25.260	0.684	j9e086ahq	16.09	20-02-2006	24.063	0.12	1.197	0.694
j9e092e9q	16.92	21-02-2006	24.828	0.357	j9e092e2q	16.96	20-02-2006	24.243	0.11	0.585	0.374
j9e048fzq	17.51	21-02-2006	25.662	0.796	—	—	—	—	—	—	—
j9e094giq	17.76	21-02-2006	24.940	0.444	—	—	—	—	—	—	—
j9e049wmq	22.58	26-02-2006	25.752	0.964	j9e049wfq	22.62	26-02-2006	24.673	0.18	1.079	0.981
j9e0a1bhq	23.42	27-02-2006	—	—	j9e0a6fzq	23.42	01-03-2006	24.743	0.18	—	—
j9e0a5drq	24.24	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	25.03	01-03-2006	—	—	j9e0b8jvq	25.03	02-03-2006	26.083	0.51	—	—
j9e0b8k2q	26.05	02-03-2006	—	—	j9e0a8otq	26.08	03-03-2006	24.793	0.19	—	—
j9e0a8p0q	27.16	03-03-2006	—	—	j9e050tqq	27.15	04-03-2006	24.833	0.22	—	—
j9e050txq	28.49	04-03-2006	—	—	j9e0c4cbq	28.49	05-03-2006	24.553	0.15	—	—
j9e0c4xiq	29.36	05-03-2006	—	—	j9e0a1baq	29.35	27-02-2007	25.293	0.33	—	—
M87 Nova 16											
j9e001zdq	-55.50	24-12-2005	—	—	j9e001z6q	-55.50	24-12-2005	—	—	—	—
j9e002hgq	-50.56	29-12-2005	—	—	j9e002h9q	-50.52	29-12-2005	29.303	1.44	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e003d6q	-45.50	03-01-2006	26.699	0.276	j9e003czq	-44.46	03-01-2006	—	—	—	—
j9e004atq	-40.25	08-01-2006	26.956	0.290	j9e004amq	-39.26	08-01-2006	—	—	—	—
j9e005d7q	-39.39	09-01-2006	27.174	0.371	j9e005d0q	-38.39	09-01-2006	27.913	0.57	-0.739	0.680
j9e006j4q	-38.13	10-01-2006	—	—	j9e006ixq	-37.19	10-01-2006	—	—	—	—
j9e007lwq	-37.00	11-01-2006	27.997	0.915	j9e007lpq	-36.00	11-01-2006	—	—	—	—
j9e008orq	-36.13	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-35.40	13-01-2006	—	—	j9e009geq	-34.39	13-01-2006	—	—	—	—
j9e010sgq	-34.59	14-01-2006	—	—	j9e010s9q	-33.59	13-01-2006	—	—	—	—
j9e011uaq	-33.64	14-01-2006	—	—	j9e011u3q	-32.60	14-01-2006	—	—	—	—
j9e012wzq	-32.84	15-01-2006	27.388	0.476	j9e012wsq	-31.80	15-01-2006	27.653	0.51	-0.265	0.698
j9e013ceq	-32.00	16-01-2006	—	—	j9e013c7q	-31.00	16-01-2006	—	—	—	—
j9e014enq	-31.12	17-01-2006	27.199	0.397	j9e014egq	-30.13	17-01-2006	—	—	—	—
j9e015iyq	-30.12	18-01-2006	—	—	j9e015irq	-29.13	18-01-2006	—	—	—	—
j9e016m9q	-29.12	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-28.06	20-01-2006	27.310	0.467	j9e017okq	-27.07	20-01-2006	27.623	0.48	-0.313	0.670
j9e018r9q	-27.12	21-01-2006	26.629	0.213	j9e018r2q	-26.14	21-01-2006	—	—	—	—
j9e019umq	-26.12	22-01-2006	27.552	0.449	j9e019ufq	-25.14	22-01-2006	29.293	1.40	-1.741	1.470
j9e020cdq	-25.06	23-01-2006	27.162	0.334	j9e020c6q	-24.07	23-01-2006	—	—	—	—
j9e021f9q	-24.05	24-01-2006	27.158	0.323	j9e021f2q	-23.01	24-01-2006	—	—	—	—
j9e022hlq	-23.05	25-01-2006	27.570	0.560	j9e022heq	-22.01	25-01-2006	—	—	—	—
j9e023llq	-22.05	26-01-2006	28.035	0.832	j9e023leq	-21.01	26-01-2006	28.253	0.81	-0.218	1.161
j9e024p5q	-21.11	27-01-2006	27.041	0.285	j9e024oyq	-20.08	27-01-2006	27.363	0.41	-0.322	0.499
j9e025sdq	-20.11	28-01-2006	27.116	0.338	j9e025s6q	-19.08	28-01-2006	—	—	—	—
j9e026vxq	-19.11	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-18.18	30-01-2006	27.511	0.428	j9e027beq	-17.21	30-01-2006	—	—	—	—
j9e028ejq	-17.12	31-01-2006	26.752	0.250	j9e028ecq	-16.08	31-01-2006	28.093	0.70	-1.341	0.743
j9e029h6q	-16.20	01-02-2006	27.602	0.595	j9e029gzq	-15.21	01-02-2006	30.093	2.01	-2.491	2.096
j9e030khq	-15.20	02-02-2006	27.421	0.579	j9e030kaq	-14.21	02-02-2006	28.533	0.98	-1.112	1.138
j9e031ndq	-14.26	03-02-2006	27.837	0.720	j9e031n6q	-13.26	03-02-2006	—	—	—	—
j9e032pxq	-13.32	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-12.52	05-02-2006	—	—	j9e033sfq	-11.53	05-02-2006	31.113	3.07	—	—
j9e034w9q	-10.73	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-9.81	06-02-2006	27.747	0.607	j9e035bdq	-9.81	06-02-2006	29.493	1.57	-1.746	1.683
j9e036dbq	-8.99	07-02-2006	27.626	0.559	j9e036d4q	-8.95	07-02-2006	33.823	5.56	-6.197	5.588
j9e037gnq	-8.15	08-02-2006	—	—	j9e037ggq	-8.14	08-02-2006	30.403	2.37	—	—
j9e038k1q	-7.34	09-02-2006	27.921	0.662	j9e038juq	-7.34	09-02-2006	—	—	—	—
j9e039m9q	-6.53	10-02-2006	27.359	0.349	j9e039m2q	-6.54	10-02-2006	29.173	1.29	-1.814	1.336
j9e040q6q	-5.68	10-02-2006	27.124	0.306	j9e040pzq	-5.68	10-02-2006	—	—	—	—
j9e041rwq	-4.88	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	-4.06	12-02-2006	—	—	j9e042u1q	-4.02	12-02-2006	33.333	5.11	—	—
j9e043dmq	-3.21	13-02-2006	25.783	0.102	j9e043dfq	-3.21	13-02-2006	25.673	0.09	0.110	0.136
j9e044h0q	-2.41	14-02-2006	25.353	0.068	j9e044gtq	-2.41	14-02-2006	25.433	0.08	-0.080	0.105
j9e045j6q	-1.60	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-0.80	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	0.00	16-02-2006	23.772	0.024	j9e047ogq	0.00	16-02-2006	23.513	0.02	0.259	0.031
j9e068qxq	0.80	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	1.60	18-02-2006	24.666	0.041	j9e073t8q	1.60	18-02-2006	23.943	0.02	0.723	0.046
j9e076v4q	2.54	19-02-2006	24.818	0.050	j9e076uxq	2.57	19-02-2006	24.173	0.03	0.645	0.058
j9e086aoq	3.53	20-02-2006	24.424	0.035	j9e086ahq	3.57	20-02-2006	24.123	0.03	0.301	0.046
j9e092e9q	4.40	21-02-2006	24.251	0.036	j9e092e2q	4.44	20-02-2006	23.853	0.02	0.398	0.041

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e048fzq	4.99	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	5.24	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	10.06	26-02-2006	24.547	0.038	j9e049wfq	10.10	26-02-2006	24.333	0.04	0.214	0.055
j9e0a1bhq	10.90	27-02-2006	24.708	0.037	j9e0a6fzq	10.90	01-03-2006	24.233	0.03	0.475	0.048
j9e0a5drq	11.72	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	12.51	01-03-2006	24.416	0.039	j9e0b8jvq	12.51	02-03-2006	24.253	0.03	0.163	0.049
j9e0b8k2q	13.53	02-03-2006	24.587	0.041	j9e0a8otq	13.56	03-03-2006	24.213	0.03	0.374	0.051
j9e0a8p0q	14.64	03-03-2006	24.764	0.044	j9e050tqq	14.63	04-03-2006	24.363	0.03	0.401	0.053
j9e050txq	15.97	04-03-2006	24.776	0.046	j9e0c4cbq	15.97	05-03-2006	24.383	0.04	0.393	0.061
j9e0c4xiq	16.84	05-03-2006	24.904	0.054	j9e0a1baq	16.83	27-02-2007	24.483	0.04	0.421	0.067
M87 Nova 17											
j9e001zdq	-52.29	24-12-2005	28.032	0.674	j9e001z6q	-52.29	24-12-2005	28.453	0.75	-0.421	1.008
j9e002hgq	-47.35	29-12-2005	27.966	0.702	j9e002h9q	-47.31	29-12-2005	—	—	—	—
j9e003d6q	-42.29	03-01-2006	27.734	0.435	j9e003czq	-41.25	03-01-2006	28.503	0.74	-0.769	0.858
j9e004atq	-37.04	08-01-2006	27.170	0.273	j9e004amq	-36.05	08-01-2006	29.903	1.78	-2.733	1.801
j9e005d7q	-36.18	09-01-2006	27.127	0.277	j9e005d0q	-35.18	09-01-2006	28.703	0.90	-1.576	0.942
j9e006j4q	-34.92	10-01-2006	28.106	0.675	j9e006ixq	-33.98	10-01-2006	—	—	—	—
j9e007lwq	-33.79	11-01-2006	27.015	0.268	j9e007lpq	-32.79	11-01-2006	—	—	—	—
j9e008orq	-32.92	12-01-2006	28.285	0.829	—	—	—	—	—	—	—
j9e009qlq	-32.19	13-01-2006	—	—	j9e009geq	-31.18	13-01-2006	—	—	—	—
j9e010sgq	-31.38	14-01-2006	27.320	0.286	j9e010s9q	-30.38	13-01-2006	29.753	1.47	-2.433	1.498
j9e011uaq	-30.43	14-01-2006	—	—	j9e011u3q	-29.39	14-01-2006	28.763	0.89	—	—
j9e012wzq	-29.63	15-01-2006	27.478	0.367	j9e012wsq	-28.59	15-01-2006	—	—	—	—
j9e013ceq	-28.79	16-01-2006	—	—	j9e013c7q	-27.79	16-01-2006	27.653	0.37	—	—
j9e014enq	-27.91	17-01-2006	28.482	0.940	j9e014egq	-26.92	17-01-2006	—	—	—	—
j9e015iyq	-26.91	18-01-2006	27.294	0.267	j9e015irq	-25.92	18-01-2006	29.903	1.83	-2.609	1.849
j9e016m9q	-25.91	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-24.85	20-01-2006	—	—	j9e017okq	-23.86	20-01-2006	—	—	—	—
j9e018r9q	-23.91	21-01-2006	27.340	0.350	j9e018r2q	-22.93	21-01-2006	29.053	1.09	-1.713	1.145
j9e019umq	-22.91	22-01-2006	28.153	0.804	j9e019ufq	-21.93	22-01-2006	29.743	1.55	-1.590	1.746
j9e020cdq	-21.85	23-01-2006	27.395	0.371	j9e020c6q	-20.86	23-01-2006	—	—	—	—
j9e021f9q	-20.84	24-01-2006	27.981	0.666	j9e021f2q	-19.80	24-01-2006	32.523	4.10	-4.542	4.154
j9e022hlq	-19.84	25-01-2006	27.211	0.294	j9e022heq	-18.80	25-01-2006	28.733	0.91	-1.522	0.956
j9e023llq	-18.84	26-01-2006	28.225	0.904	j9e023leq	-17.80	26-01-2006	28.403	0.78	-0.178	1.194
j9e024p5q	-17.90	27-01-2006	—	—	j9e024oyq	-16.87	27-01-2006	—	—	—	—
j9e025sdq	-16.90	28-01-2006	—	—	j9e025s6q	-15.87	28-01-2006	—	—	—	—
j9e026vxq	-15.90	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-14.97	30-01-2006	26.958	0.267	j9e027beq	-14.00	30-01-2006	—	—	—	—
j9e028ejq	-13.91	31-01-2006	26.974	0.261	j9e028ecq	-12.87	31-01-2006	28.343	0.66	-1.369	0.710
j9e029h6q	-12.99	01-02-2006	26.791	0.229	j9e029gzq	-12.00	01-02-2006	—	—	—	—
j9e030khq	-11.99	02-02-2006	27.846	0.377	j9e030kaq	-11.00	02-02-2006	28.123	0.59	-0.277	0.700
j9e031ndq	-11.05	03-02-2006	—	—	j9e031n6q	-10.05	03-02-2006	29.073	1.09	—	—
j9e032pxq	-10.11	04-02-2006	27.983	0.551	—	—	—	—	—	—	—
j9e033smq	-9.31	05-02-2006	26.520	0.166	j9e033sfq	-8.32	05-02-2006	—	—	—	—
j9e034w9q	-7.52	05-02-2006	27.586	0.458	—	—	—	—	—	—	—
j9e035bkq	-6.60	06-02-2006	27.347	0.335	j9e035bdq	-6.60	06-02-2006	—	—	—	—
j9e036dbq	-5.78	07-02-2006	28.297	0.766	j9e036d4q	-5.74	07-02-2006	—	—	—	—
j9e037gnq	-4.94	08-02-2006	27.166	0.235	j9e037ggq	-4.93	08-02-2006	28.733	0.94	-1.567	0.969
j9e038k1q	-4.13	09-02-2006	25.616	0.081	j9e038juq	-4.13	09-02-2006	25.563	0.07	0.053	0.107
j9e039m9q	-3.32	10-02-2006	25.366	0.064	j9e039m2q	-3.33	10-02-2006	25.023	0.05	0.343	0.081

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e040q6q	-2.47	10-02-2006	24.921	0.042	j9e040pzq	-2.47	10-02-2006	24.653	0.04	0.268	0.058
j9e041rwq	-1.67	11-02-2006	24.676	0.035	—	—	—	—	—	—	—
j9e042u8q	-0.85	12-02-2006	24.205	0.028	j9e042u1q	-0.81	12-02-2006	23.873	0.02	0.332	0.034
j9e043dmq	0.00	13-02-2006	23.805	0.023	j9e043dfq	0.00	13-02-2006	23.643	0.02	0.162	0.030
j9e044h0q	0.80	14-02-2006	24.593	0.037	j9e044gtq	0.80	14-02-2006	24.183	0.02	0.410	0.042
j9e045j6q	1.61	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	2.41	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	3.21	16-02-2006	25.423	0.075	j9e047ogq	3.21	16-02-2006	24.643	0.03	—	—
j9e068qxq	4.01	17-02-2006	24.487	0.037	—	—	—	—	—	—	—
j9e073tfq	4.81	18-02-2006	24.321	0.028	j9e073t8q	4.81	18-02-2006	23.893	0.02	0.428	0.034
j9e076v4q	5.75	19-02-2006	24.518	0.040	j9e076uxq	5.78	19-02-2006	24.253	0.03	0.265	0.050
j9e086aoq	6.74	20-02-2006	—	—	j9e086ahq	6.78	20-02-2006	23.993	0.02	—	—
j9e092e9q	7.61	21-02-2006	24.276	0.029	j9e092e2q	7.65	20-02-2006	23.863	0.02	0.413	0.035
j9e048fzq	8.20	21-02-2006	24.204	0.027	—	—	—	—	—	—	—
j9e094giq	8.45	21-02-2006	24.232	0.027	—	—	—	—	—	—	—
j9e049wmq	13.27	26-02-2006	24.583	0.036	j9e049wfq	13.31	26-02-2006	24.053	0.02	0.530	0.041
j9e0a1bhq	14.11	27-02-2006	24.530	0.034	j9e0a6fzq	14.11	01-03-2006	24.053	0.03	0.477	0.045
j9e0a5drq	14.93	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	15.72	01-03-2006	24.536	0.032	j9e0b8jvq	15.72	02-03-2006	24.193	0.03	0.343	0.044
j9e0b8k2q	16.74	02-03-2006	24.508	0.032	j9e0a8otq	16.77	03-03-2006	24.023	0.02	0.485	0.038
j9e0a8p0q	17.85	03-03-2006	—	—	j9e050tqq	17.84	04-03-2006	23.883	0.02	—	—
j9e050txq	19.18	04-03-2006	—	—	j9e0c4cbq	19.18	05-03-2006	23.903	0.02	—	—
j9e0c4xiq	20.05	05-03-2006	24.998	0.056	j9e0a1baq	20.04	27-02-2007	24.343	0.03	0.655	0.064
M87 Nova 18											
j9e001zdq	-71.47	24-12-2005	—	—	j9e001z6q	-71.47	24-12-2005	28.373	0.81	—	—
j9e002hgq	-66.53	29-12-2005	—	—	j9e002h9q	-66.49	29-12-2005	30.463	2.42	—	—
j9e003d6q	-61.47	03-01-2006	—	—	j9e003czq	-60.43	03-01-2006	29.943	1.91	—	—
j9e004atq	-56.22	08-01-2006	—	—	j9e004amq	-55.23	08-01-2006	27.313	0.38	—	—
j9e005d7q	-55.36	09-01-2006	—	—	j9e005d0q	-54.36	09-01-2006	27.973	0.64	—	—
j9e006j4q	-54.10	10-01-2006	—	—	j9e006ixq	-53.16	10-01-2006	—	—	—	—
j9e007lwq	-52.97	11-01-2006	—	—	j9e007lpq	-51.97	11-01-2006	—	—	—	—
j9e008orq	-52.10	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-51.37	13-01-2006	—	—	j9e009geq	-50.36	13-01-2006	—	—	—	—
j9e010sgq	-50.56	14-01-2006	—	—	j9e010s9q	-49.56	13-01-2006	28.293	0.75	—	—
j9e011uaq	-49.61	14-01-2006	—	—	j9e011u3q	-48.57	14-01-2006	28.713	1.09	—	—
j9e012wzq	-48.81	15-01-2006	—	—	j9e012wsq	-47.77	15-01-2006	28.113	0.72	—	—
j9e013ceq	-47.97	16-01-2006	—	—	j9e013c7q	-46.97	16-01-2006	—	—	—	—
j9e014enq	-47.09	17-01-2006	—	—	j9e014egq	-46.10	17-01-2006	28.983	1.31	—	—
j9e015iyq	-46.09	18-01-2006	—	—	j9e015irq	-45.10	18-01-2006	30.253	2.32	—	—
j9e016m9q	-45.09	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-44.03	20-01-2006	—	—	j9e017okq	-43.04	20-01-2006	—	—	—	—
j9e018r9q	-43.09	21-01-2006	—	—	j9e018r2q	-42.11	21-01-2006	—	—	—	—
j9e019umq	-42.09	22-01-2006	—	—	j9e019ufq	-41.11	22-01-2006	—	—	—	—
j9e020cdq	-41.03	23-01-2006	—	—	j9e020c6q	-40.04	23-01-2006	29.163	1.35	—	—
j9e021f9q	-40.02	24-01-2006	—	—	j9e021f2q	-38.98	24-01-2006	—	—	—	—
j9e022hlq	-39.02	25-01-2006	—	—	j9e022heq	-37.98	25-01-2006	—	—	—	—
j9e023llq	-38.02	26-01-2006	—	—	j9e023leq	-36.98	26-01-2006	28.063	0.68	—	—
j9e024p5q	-37.08	27-01-2006	—	—	j9e024oyq	-36.05	27-01-2006	29.493	1.62	—	—
j9e025sdq	-36.08	28-01-2006	—	—	j9e025s6q	-35.05	28-01-2006	—	—	—	—
j9e026vxq	-35.08	29-01-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e027blq	-34.15	30-01-2006	—	—	j9e027beq	-33.18	30-01-2006	27.433	0.49	—	—
j9e028ejq	-33.09	31-01-2006	—	—	j9e028ecq	-32.05	31-01-2006	—	—	—	—
j9e029h6q	-32.17	01-02-2006	—	—	j9e029gzq	-31.18	01-02-2006	—	—	—	—
j9e030khq	-31.17	02-02-2006	—	—	j9e030kaq	-30.18	02-02-2006	27.953	0.64	—	—
j9e031ndq	-30.23	03-02-2006	—	—	j9e031n6q	-29.23	03-02-2006	30.353	2.32	—	—
j9e032pxq	-29.29	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-28.49	05-02-2006	—	—	j9e033sfq	-27.50	05-02-2006	29.043	1.31	—	—
j9e034w9q	-26.70	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-25.78	06-02-2006	—	—	j9e035bdq	-25.78	06-02-2006	—	—	—	—
j9e036dbq	-24.96	07-02-2006	—	—	j9e036d4q	-24.92	07-02-2006	—	—	—	—
j9e037gnq	-24.12	08-02-2006	—	—	j9e037ggq	-24.11	08-02-2006	30.923	2.84	—	—
j9e038k1q	-23.31	09-02-2006	—	—	j9e038juq	-23.31	09-02-2006	—	—	—	—
j9e039m9q	-22.50	10-02-2006	—	—	j9e039m2q	-22.51	10-02-2006	—	—	—	—
j9e040q6q	-21.65	10-02-2006	—	—	j9e040pzq	-21.65	10-02-2006	27.863	0.65	—	—
j9e041rwq	-20.85	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	-20.03	12-02-2006	—	—	j9e042u1q	-19.99	12-02-2006	—	—	—	—
j9e043dmq	-19.18	13-02-2006	—	—	j9e043dfq	-19.18	13-02-2006	28.463	0.94	—	—
j9e044h0q	-18.38	14-02-2006	—	—	j9e044gtq	-18.38	14-02-2006	30.113	2.02	—	—
j9e045j6q	-17.57	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-16.77	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	-15.97	16-02-2006	—	—	j9e047ogq	-15.97	16-02-2006	—	—	—	—
j9e068qxq	-15.17	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	-14.37	18-02-2006	27.448	0.472	j9e073t8q	-14.37	18-02-2006	—	—	—	—
j9e076v4q	-13.43	19-02-2006	—	—	j9e076uxq	-13.40	19-02-2006	—	—	—	—
j9e086aoq	-12.44	20-02-2006	—	—	j9e086ahq	-12.40	20-02-2006	—	—	—	—
j9e092e9q	-11.57	21-02-2006	—	—	j9e092e2q	-11.53	20-02-2006	28.283	0.82	—	—
j9e048fzq	-10.98	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	-10.73	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	-5.91	26-02-2006	25.334	0.073	j9e049wfq	-5.87	26-02-2006	24.993	0.06	0.341	0.094
j9e0a1bhq	-5.07	27-02-2006	24.515	0.042	j9e0a6fzq	-5.07	01-03-2006	24.303	0.04	0.212	0.058
j9e0a5drq	-4.25	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	-3.46	01-03-2006	23.948	0.028	j9e0b8jvq	-3.46	02-03-2006	23.563	0.02	0.385	0.034
j9e0b8k2q	-2.44	02-03-2006	24.129	0.029	j9e0a8otq	-2.41	03-03-2006	23.613	0.02	0.516	0.035
j9e0a8p0q	-1.33	03-03-2006	23.889	0.024	j9e050tqq	-1.34	04-03-2006	23.283	0.02	0.606	0.031
j9e050txq	0.00	04-03-2006	23.829	0.023	j9e0c4cbq	0.00	05-03-2006	23.853	0.02	-0.024	0.030
j9e0c4xiq	0.87	05-03-2006	24.292	0.029	j9e0a1baq	0.86	27-02-2007	23.883	0.03	0.409	0.042
M87 Nova 19											
j9e001zdzq	-40.30	24-12-2005	—	—	j9e001z6q	-40.30	24-12-2005	—	—	—	—
j9e002hgq	-35.36	29-12-2005	—	—	j9e002h9q	-35.32	29-12-2005	—	—	—	—
j9e003d6q	-30.30	03-01-2006	—	—	j9e003czq	-29.26	03-01-2006	—	—	—	—
j9e004atq	-25.05	08-01-2006	—	—	j9e004amq	-24.06	08-01-2006	—	—	—	—
j9e005d7q	-24.19	09-01-2006	—	—	j9e005d0q	-23.19	09-01-2006	—	—	—	—
j9e006j4q	-22.93	10-01-2006	—	—	j9e006ixq	-21.99	10-01-2006	—	—	—	—
j9e007lwq	-21.80	11-01-2006	—	—	j9e007lpq	-20.80	11-01-2006	—	—	—	—
j9e008orq	-20.93	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-20.20	13-01-2006	—	—	j9e009geq	-19.19	13-01-2006	—	—	—	—
j9e010sgq	-19.39	14-01-2006	—	—	j9e010s9q	-18.39	13-01-2006	—	—	—	—
j9e011uaq	-18.44	14-01-2006	—	—	j9e011u3q	-17.40	14-01-2006	—	—	—	—
j9e012wzq	-17.64	15-01-2006	—	—	j9e012wsq	-16.60	15-01-2006	—	—	—	—
j9e013ceq	-16.80	16-01-2006	—	—	j9e013c7q	-15.80	16-01-2006	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e014enq	-15.92	17-01-2006	—	—	j9e014egq	-14.93	17-01-2006	28.133	1.78	—	—
j9e015iyq	-14.92	18-01-2006	—	—	j9e015irq	-13.93	18-01-2006	26.963	1.08	—	—
j9e016m9q	-13.92	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-12.86	20-01-2006	—	—	j9e017okq	-11.87	20-01-2006	—	—	—	—
j9e018r9q	-11.92	21-01-2006	—	—	j9e018r2q	-10.94	21-01-2006	—	—	—	—
j9e019umq	-10.92	22-01-2006	—	—	j9e019ufq	-9.94	22-01-2006	—	—	—	—
j9e020cdq	-9.86	23-01-2006	—	—	j9e020c6q	-8.87	23-01-2006	—	—	—	—
j9e021f9q	-8.85	24-01-2006	—	—	j9e021f2q	-7.81	24-01-2006	—	—	—	—
j9e022hlq	-7.85	25-01-2006	—	—	j9e022heq	-6.81	25-01-2006	—	—	—	—
j9e023llq	-6.85	26-01-2006	—	—	j9e023leq	-5.81	26-01-2006	—	—	—	—
j9e024p5q	-5.91	27-01-2006	—	—	j9e024oyq	-4.88	27-01-2006	—	—	—	—
j9e025sdq	-4.91	28-01-2006	—	—	j9e025s6q	-3.88	28-01-2006	—	—	—	—
j9e026vxq	-3.91	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-2.98	30-01-2006	—	—	j9e027beq	-2.01	30-01-2006	—	—	—	—
j9e028ejq	-1.92	31-01-2006	25.561	0.868	j9e028ecq	-0.88	31-01-2006	25.003	0.24	0.558	0.901
j9e029h6q	-1.00	01-02-2006	24.297	0.189	j9e029gzq	-0.01	01-02-2006	23.803	0.09	0.494	0.209
j9e030khq	0.00	02-02-2006	23.895	0.177	j9e030kaq	0.99	02-02-2006	23.653	0.07	0.242	0.190
j9e031ndq	0.94	03-02-2006	23.899	0.174	j9e031n6q	1.94	03-02-2006	23.713	0.07	0.186	0.188
j9e032pxq	1.88	04-02-2006	25.415	0.626	—	—	—	—	—	—	—
j9e033smq	2.68	05-02-2006	25.712	0.858	j9e033sfq	3.67	05-02-2006	24.273	0.12	1.439	0.866
j9e034w9q	4.47	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	5.39	06-02-2006	25.236	0.556	j9e035bdq	5.39	06-02-2006	24.383	0.12	0.853	0.569
j9e036dbq	6.21	07-02-2006	—	—	j9e036d4q	6.25	07-02-2006	24.033	0.09	—	—
j9e037gnq	7.05	08-02-2006	—	—	j9e037ggq	7.06	08-02-2006	23.723	0.08	—	—
j9e038k1q	7.86	09-02-2006	25.304	0.571	j9e038juq	7.86	09-02-2006	24.403	0.14	0.901	0.588
j9e039m9q	8.67	10-02-2006	25.208	0.624	j9e039m2q	8.66	10-02-2006	24.883	0.18	0.325	0.649
j9e040q6q	9.52	10-02-2006	26.736	2.124	j9e040pzq	9.52	10-02-2006	25.423	0.30	1.313	2.145
j9e041rwq	10.32	11-02-2006	25.564	0.787	—	—	—	—	—	—	—
j9e042u8q	11.14	12-02-2006	25.700	0.919	j9e042u1q	11.18	12-02-2006	24.873	0.19	0.827	0.938
j9e043dmq	11.99	13-02-2006	26.165	1.243	j9e043dfq	11.99	13-02-2006	25.073	0.23	1.092	1.264
j9e044h0q	12.79	14-02-2006	25.968	1.020	j9e044gtq	12.79	14-02-2006	25.083	0.23	0.885	1.046
j9e045j6q	13.60	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	14.40	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	15.20	16-02-2006	—	—	j9e047ogq	15.20	16-02-2006	25.463	0.33	—	—
j9e068qxq	16.00	17-02-2006	27.161	3.306	—	—	—	—	—	—	—
j9e073tfq	16.80	18-02-2006	—	—	j9e073t8q	16.80	18-02-2006	25.293	0.32	—	—
j9e076v4q	17.74	19-02-2006	—	—	j9e076uxq	17.77	19-02-2006	25.393	0.30	—	—
j9e086aoq	18.73	20-02-2006	—	—	j9e086ahq	18.77	20-02-2006	25.743	0.35	—	—
j9e092e9q	19.60	21-02-2006	—	—	j9e092e2q	19.64	20-02-2006	25.893	0.59	—	—
j9e048fzq	20.19	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	20.44	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	25.26	26-02-2006	—	—	j9e049wfq	25.30	26-02-2006	26.323	0.60	—	—
j9e0a1bhq	26.10	27-02-2006	—	—	j9e0a6fzq	26.10	01-03-2006	25.963	0.52	—	—
j9e0a5drq	26.92	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	27.71	01-03-2006	—	—	j9e0b8jvq	27.71	02-03-2006	25.053	0.24	—	—
j9e0b8k2q	28.73	02-03-2006	—	—	j9e0a8otq	28.76	03-03-2006	26.983	0.93	—	—
j9e0a8p0q	29.84	03-03-2006	—	—	j9e050tqq	29.83	04-03-2006	—	—	—	—
j9e050txq	31.17	04-03-2006	—	—	j9e0c4cbq	31.17	05-03-2006	26.433	0.64	—	—
j9e0c4xiq	32.04	05-03-2006	—	—	j9e0a1baq	32.03	27-02-2007	25.723	0.43	—	—
M87 Nova 20											

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e001zdq	-10.00	24-12-2005			j9e001z6q	-10.00	24-12-2005	—	—	—	—
j9e002hgq	-5.06	29-12-2005	24.972	0.083	j9e002h9q	-5.02	29-12-2005	25.933	0.19	-0.961	0.207
j9e003d6q	0.00	03-01-2006	23.939	0.035	j9e003czq	1.04	03-01-2006	23.513	0.02	0.426	0.040
j9e004atq	5.25	08-01-2006	24.255	0.037	j9e004amq	6.24	08-01-2006	23.663	0.03	0.592	0.048
j9e005d7q	6.11	09-01-2006	24.405	0.051	j9e005d0q	7.11	09-01-2006	23.893	0.03	0.512	0.059
j9e006j4q	7.37	10-01-2006	24.442	0.052	j9e006ixq	8.31	10-01-2006	23.873	0.04	0.569	0.066
j9e007lwq	8.50	11-01-2006	24.652	0.070	j9e007lpq	9.50	11-01-2006	24.243	0.05	0.409	0.086
j9e008orq	9.37	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	10.10	13-01-2006	24.791	0.072	j9e009geq	11.11	13-01-2006	24.403	0.06	0.388	0.094
j9e010sgq	10.91	14-01-2006	—	—	j9e010s9q	11.91	13-01-2006	24.603	0.06	—	—
j9e011uaq	11.86	14-01-2006	24.879	0.075	j9e011u3q	12.90	14-01-2006	24.883	0.08	-0.004	0.110
j9e012wzq	12.66	15-01-2006	25.105	0.091	j9e012wsq	13.70	15-01-2006	24.733	0.07	0.372	0.115
j9e013ceq	13.50	16-01-2006	—	—	j9e013c7q	14.50	16-01-2006	24.733	0.07	—	—
j9e014enq	14.38	17-01-2006	24.815	0.068	j9e014egq	15.37	17-01-2006	24.833	0.08	-0.018	0.105
j9e015iyq	15.38	18-01-2006	24.906	0.084	j9e015irq	16.37	18-01-2006	25.133	0.12	-0.227	0.146
j9e016m9q	16.38	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	17.44	20-01-2006	25.178	0.103	j9e017okq	18.43	20-01-2006	25.353	0.12	-0.175	0.158
j9e018r9q	18.38	21-01-2006	25.142	0.083	j9e018r2q	19.36	21-01-2006	25.313	0.12	-0.171	0.146
j9e019umq	19.38	22-01-2006	—	—	j9e019ufq	20.36	22-01-2006	25.273	0.11	—	—
j9e020cdq	20.44	23-01-2006	25.093	0.090	j9e020c6q	21.43	23-01-2006	25.153	0.11	-0.060	0.142
j9e021f9q	21.45	24-01-2006	24.957	0.073	j9e021f2q	22.49	24-01-2006	25.513	0.15	-0.556	0.167
j9e022hlq	22.45	25-01-2006	25.594	0.143	j9e022heq	23.49	25-01-2006	25.543	0.17	0.051	0.222
j9e023llq	23.45	26-01-2006	25.700	0.166	j9e023leq	24.49	26-01-2006	25.523	0.16	0.177	0.231
j9e024p5q	24.39	27-01-2006	25.231	0.086	j9e024oyq	25.42	27-01-2006	25.713	0.18	-0.482	0.199
j9e025sdq	25.39	28-01-2006	25.571	0.155	j9e025s6q	26.42	28-01-2006	25.833	0.17	-0.262	0.230
j9e026vxq	26.39	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	27.32	30-01-2006	25.597	0.104	j9e027beq	28.29	30-01-2006	25.713	0.16	-0.116	0.191
j9e028ejq	28.38	31-01-2006	—	—	j9e028ecq	29.42	31-01-2006	25.953	0.19	—	—
j9e029h6q	29.30	01-02-2006	25.575	0.126	j9e029gzq	30.29	01-02-2006	25.553	0.14	0.022	0.188
j9e030khq	30.30	02-02-2006	25.516	0.116	j9e030kaq	31.29	02-02-2006	26.673	0.42	-1.157	0.436
j9e031ndq	31.24	03-02-2006	25.574	0.127	j9e031n6q	32.24	03-02-2006	26.033	0.23	-0.459	0.263
j9e032pxq	32.18	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	32.98	05-02-2006	25.635	0.114	j9e033sfq	33.97	05-02-2006	26.423	0.30	-0.788	0.321
j9e034w9q	34.77	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	35.69	06-02-2006	—	—	j9e035bdq	35.69	06-02-2006	26.723	0.36	—	—
j9e036dbq	36.51	07-02-2006	25.830	0.169	j9e036d4q	36.55	07-02-2006	27.733	0.74	-1.903	0.759
j9e037gnq	37.35	08-02-2006	25.856	0.172	j9e037ggq	37.36	08-02-2006	27.003	0.48	-1.147	0.510
j9e038k1q	38.16	09-02-2006	—	—	j9e038juq	38.16	09-02-2006	26.063	0.23	—	—
j9e039m9q	38.97	10-02-2006	25.858	0.164	j9e039m2q	38.96	10-02-2006	26.483	0.29	-0.625	0.333
j9e040q6q	39.82	10-02-2006	26.101	0.213	j9e040pzq	39.82	10-02-2006	26.853	0.42	-0.752	0.471
j9e041rwq	40.62	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	41.44	12-02-2006	25.547	0.112	j9e042u1q	41.48	12-02-2006	26.733	0.37	-1.186	0.387
j9e043dmq	42.29	13-02-2006	26.069	0.153	j9e043dfq	42.29	13-02-2006	26.523	0.34	-0.454	0.373
j9e044h0q	43.09	14-02-2006	25.763	0.156	j9e044gtq	43.09	14-02-2006	—	—	—	—
j9e045j6q	43.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	44.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	45.50	16-02-2006	26.966	0.597	j9e047ogq	45.50	16-02-2006	—	—	—	—
j9e068qxq	46.30	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	47.10	18-02-2006	25.810	0.134	j9e073t8q	47.10	18-02-2006	30.193	2.52	-4.383	2.524
j9e076v4q	48.04	19-02-2006	26.047	0.236	j9e076uxq	48.07	19-02-2006	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e086aoq	49.03	20-02-2006	25.934	0.199	j9e086ahq	49.07	20-02-2006	29.513	2.05	-3.579	2.060
j9e092e9q	49.90	21-02-2006	26.119	0.221	j9e092e2q	49.94	20-02-2006	—	—	—	—
j9e048fzq	50.49	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	50.74	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	55.56	26-02-2006	26.538	0.364	j9e049wfq	55.60	26-02-2006	—	—	—	—
j9e0a1bhq	56.40	27-02-2006	26.315	0.270	j9e0a6fzq	56.40	01-03-2006	—	—	—	—
j9e0a5drq	57.22	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	58.01	01-03-2006	25.987	0.194	j9e0b8jvq	58.01	02-03-2006	—	—	—	—
j9e0b8k2q	59.03	02-03-2006	26.424	0.261	j9e0a8otq	59.06	03-03-2006	—	—	—	—
j9e0a8p0q	60.14	03-03-2006	26.157	0.215	j9e050tqq	60.13	04-03-2006	—	—	—	—
j9e050txq	61.47	04-03-2006	26.138	0.192	j9e0c4cbq	61.47	05-03-2006	—	—	—	—
j9e0c4xiq	62.34	05-03-2006	25.928	0.149	j9e0a1baq	62.33	27-02-2007	—	—	—	—
M87 Nova 21											
j9e001zdq	-48.97	24-12-2005	—	—	j9e001z6q	-48.97	24-12-2005	—	—	—	—
j9e002hggq	-44.03	29-12-2005	—	—	j9e002h9q	-43.99	29-12-2005	—	—	—	—
j9e003d6q	-38.97	03-01-2006	26.844	0.375	j9e003czq	-37.93	03-01-2006	—	—	—	—
j9e004atq	-33.72	08-01-2006	26.949	0.351	j9e004amq	-32.73	08-01-2006	—	—	—	—
j9e005d7q	-32.86	09-01-2006	—	—	j9e005d0q	-31.86	09-01-2006	27.883	0.71	—	—
j9e006j4q	-31.60	10-01-2006	—	—	j9e006ixq	-30.66	10-01-2006	28.253	0.86	—	—
j9e007lwq	-30.47	11-01-2006	27.407	0.507	j9e007lpq	-29.47	11-01-2006	—	—	—	—
j9e008orq	-29.60	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-28.87	13-01-2006	—	—	j9e009geq	-27.86	13-01-2006	27.443	0.57	—	—
j9e010sgq	-28.06	14-01-2006	27.633	0.666	j9e010s9q	-27.06	13-01-2006	—	—	—	—
j9e011uaq	-27.11	14-01-2006	—	—	j9e011u3q	-26.07	14-01-2006	—	—	—	—
j9e012wzq	-26.31	15-01-2006	27.666	0.640	j9e012wsq	-25.27	15-01-2006	—	—	—	—
j9e013ceq	-25.47	16-01-2006	—	—	j9e013c7q	-24.47	16-01-2006	—	—	—	—
j9e014enq	-24.59	17-01-2006	—	—	j9e014egq	-23.60	17-01-2006	27.723	0.55	—	—
j9e015iyq	-23.59	18-01-2006	27.178	0.430	j9e015irq	-22.60	18-01-2006	—	—	—	—
j9e016m9q	-22.59	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-21.53	20-01-2006	26.754	0.292	j9e017okq	-20.54	20-01-2006	—	—	—	—
j9e018r9q	-20.59	21-01-2006	27.072	0.360	j9e018r2q	-19.61	21-01-2006	28.283	0.90	-1.211	0.969
j9e019umq	-19.59	22-01-2006	26.492	0.242	j9e019ufq	-18.61	22-01-2006	28.483	0.96	-1.991	0.990
j9e020cdq	-18.53	23-01-2006	—	—	j9e020c6q	-17.54	23-01-2006	—	—	—	—
j9e021f9q	-17.52	24-01-2006	26.960	0.341	j9e021f2q	-16.48	24-01-2006	27.733	0.56	-0.773	0.656
j9e022hlq	-16.52	25-01-2006	—	—	j9e022heq	-15.48	25-01-2006	29.443	1.76	—	—
j9e023llq	-15.52	26-01-2006	—	—	j9e023leq	-14.48	26-01-2006	—	—	—	—
j9e024p5q	-14.58	27-01-2006	27.976	0.846	j9e024oyq	-13.55	27-01-2006	29.863	2.00	-1.887	2.172
j9e025sdq	-13.58	28-01-2006	—	—	j9e025s6q	-12.55	28-01-2006	29.693	1.80	—	—
j9e026vxq	-12.58	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-11.65	30-01-2006	—	—	j9e027beq	-10.68	30-01-2006	—	—	—	—
j9e028ejq	-10.59	31-01-2006	—	—	j9e028ecq	-9.55	31-01-2006	—	—	—	—
j9e029h6q	-9.67	01-02-2006	26.790	0.324	j9e029gzq	-8.68	01-02-2006	27.893	0.68	-1.103	0.753
j9e030khq	-8.67	02-02-2006	—	—	j9e030kaq	-7.68	02-02-2006	—	—	—	—
j9e031ndq	-7.73	03-02-2006	—	—	j9e031n6q	-6.73	03-02-2006	29.313	1.57	—	—
j9e032pxq	-6.79	04-02-2006	25.820	0.126	—	—	—	—	—	—	—
j9e033smq	-5.99	05-02-2006	26.004	0.170	j9e033sfq	-5.00	05-02-2006	26.293	0.18	-0.289	0.248
j9e034w9q	-4.20	05-02-2006	26.178	0.138	—	—	—	—	—	—	—
j9e035bkq	-3.28	06-02-2006	25.732	0.112	j9e035bdq	-3.28	06-02-2006	25.833	0.15	-0.101	0.187
j9e036dbq	-2.46	07-02-2006	—	—	j9e036d4q	-2.42	07-02-2006	25.233	0.09	—	—
j9e037gnq	-1.62	08-02-2006	25.013	0.060	j9e037ggq	-1.61	08-02-2006	24.723	0.05	0.290	0.078

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e038k1q	-0.81	09-02-2006	24.588	0.043	j9e038juq	-0.81	09-02-2006	24.213	0.03	0.375	0.052
j9e039m9q	0.00	10-02-2006	24.066	0.031	j9e039m2q	-0.01	10-02-2006	23.753	0.02	0.313	0.037
j9e040q6q	0.85	10-02-2006	24.604	0.045	j9e040pzq	0.85	10-02-2006	24.223	0.03	0.381	0.054
j9e041rwq	1.65	11-02-2006	25.309	0.073	—	—	—	—	—	—	—
j9e042u8q	2.47	12-02-2006	25.655	0.120	j9e042u1q	2.51	12-02-2006	24.993	0.07	0.662	0.139
j9e043dmq	3.32	13-02-2006	25.234	0.067	j9e043dfq	3.32	13-02-2006	24.853	0.06	0.381	0.090
j9e044h0q	4.12	14-02-2006	25.429	0.089	j9e044gtq	4.12	14-02-2006	25.143	0.08	0.286	0.120
j9e045j6q	4.93	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	5.73	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	6.53	16-02-2006	25.542	0.098	j9e047ogq	6.53	16-02-2006	25.043	0.07	0.499	0.120
j9e068qxq	7.33	17-02-2006	25.290	0.085	—	—	—	—	—	—	—
j9e073tfq	8.13	18-02-2006	24.899	0.054	j9e073t8q	8.13	18-02-2006	24.553	0.04	0.346	0.067
j9e076v4q	9.07	19-02-2006	25.196	0.082	j9e076uxq	9.10	19-02-2006	24.953	0.06	0.243	0.102
j9e086aoq	10.06	20-02-2006	25.248	0.076	j9e086ahq	10.10	20-02-2006	24.753	0.05	0.495	0.091
j9e092e9q	10.93	21-02-2006	25.355	0.094	j9e092e2q	10.97	20-02-2006	24.943	0.06	0.412	0.112
j9e048fzq	11.52	21-02-2006	25.193	0.066	—	—	—	—	—	—	—
j9e094giq	11.77	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	16.59	26-02-2006	25.061	0.068	j9e049wfq	16.63	26-02-2006	24.513	0.04	0.548	0.079
j9e0a1bhq	17.43	27-02-2006	24.926	0.059	j9e0a6fzq	17.43	01-03-2006	24.493	0.04	0.433	0.071
j9e0a5drq	18.25	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	19.04	01-03-2006	25.075	0.063	j9e0b8jvq	19.04	02-03-2006	24.753	0.06	0.322	0.087
j9e0b8k2q	20.06	02-03-2006	25.206	0.069	j9e0a8otq	20.09	03-03-2006	24.853	0.06	0.353	0.091
j9e0a8p0q	21.17	03-03-2006	25.155	0.065	j9e050tqq	21.16	04-03-2006	24.783	0.06	0.372	0.088
j9e050txq	22.50	04-03-2006	—	—	j9e0c4cbq	22.50	05-03-2006	24.943	0.07	—	—
j9e0c4xiq	23.37	05-03-2006	25.235	0.072	j9e0a1baq	23.36	27-02-2007	25.093	0.07	0.142	0.100
M87 Nova 22											
j9e001zdq	-71.47	24-12-2005	—	—	j9e001z6q	-71.47	24-12-2005	30.473	2.30	—	—
j9e002hgq	-66.53	29-12-2005	—	—	j9e002h9q	-66.49	29-12-2005	27.773	0.55	—	—
j9e003d6q	-61.47	03-01-2006	—	—	j9e003czq	-60.43	03-01-2006	—	—	—	—
j9e004atq	-56.22	08-01-2006	—	—	j9e004amq	-55.23	08-01-2006	28.993	1.31	—	—
j9e005d7q	-55.36	09-01-2006	—	—	j9e005d0q	-54.36	09-01-2006	—	—	—	—
j9e006j4q	-54.10	10-01-2006	—	—	j9e006ixq	-53.16	10-01-2006	—	—	—	—
j9e007lwq	-52.97	11-01-2006	—	—	j9e007lpq	-51.97	11-01-2006	28.063	0.77	—	—
j9e008orq	-52.10	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-51.37	13-01-2006	—	—	j9e009geq	-50.36	13-01-2006	—	—	—	—
j9e010sgq	-50.56	14-01-2006	—	—	j9e010s9q	-49.56	13-01-2006	—	—	—	—
j9e011uaq	-49.61	14-01-2006	—	—	j9e011u3q	-48.57	14-01-2006	28.273	0.92	—	—
j9e012wzq	-48.81	15-01-2006	—	—	j9e012wsq	-47.77	15-01-2006	27.803	0.60	—	—
j9e013ceq	-47.97	16-01-2006	—	—	j9e013c7q	-46.97	16-01-2006	—	—	—	—
j9e014enq	-47.09	17-01-2006	—	—	j9e014egq	-46.10	17-01-2006	27.623	0.54	—	—
j9e015iyq	-46.09	18-01-2006	—	—	j9e015irq	-45.10	18-01-2006	29.123	1.47	—	—
j9e016m9q	-45.09	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-44.03	20-01-2006	—	—	j9e017okq	-43.04	20-01-2006	29.483	1.62	—	—
j9e018r9q	-43.09	21-01-2006	—	—	j9e018r2q	-42.11	21-01-2006	27.083	0.38	—	—
j9e019umq	-42.09	22-01-2006	—	—	j9e019ufq	-41.11	22-01-2006	—	—	—	—
j9e020cdq	-41.03	23-01-2006	—	—	j9e020c6q	-40.04	23-01-2006	—	—	—	—
j9e021f9q	-40.02	24-01-2006	—	—	j9e021f2q	-38.98	24-01-2006	—	—	—	—
j9e022hlq	-39.02	25-01-2006	—	—	j9e022heq	-37.98	25-01-2006	28.363	0.95	—	—
j9e023llq	-38.02	26-01-2006	—	—	j9e023leq	-36.98	26-01-2006	—	—	—	—
j9e024p5q	-37.08	27-01-2006	—	—	j9e024oyq	-36.05	27-01-2006	27.553	0.49	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e025sdq	-36.08	28-01-2006	—	—	j9e025s6q	-35.05	28-01-2006	—	—	—	—
j9e026vxq	-35.08	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-34.15	30-01-2006	—	—	j9e027beq	-33.18	30-01-2006	—	—	—	—
j9e028ejq	-33.09	31-01-2006	—	—	j9e028ecq	-32.05	31-01-2006	—	—	—	—
j9e029h6q	-32.17	01-02-2006	—	—	j9e029gzq	-31.18	01-02-2006	28.373	0.95	—	—
j9e030khq	-31.17	02-02-2006	—	—	j9e030kaq	-30.18	02-02-2006	—	—	—	—
j9e031ndq	-30.23	03-02-2006	—	—	j9e031n6q	-29.23	03-02-2006	—	—	—	—
j9e032pxq	-29.29	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-28.49	05-02-2006	—	—	j9e033sfq	-27.50	05-02-2006	—	—	—	—
j9e034w9q	-26.70	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-25.78	06-02-2006	—	—	j9e035bdq	-25.78	06-02-2006	—	—	—	—
j9e036dbq	-24.96	07-02-2006	—	—	j9e036d4q	-24.92	07-02-2006	27.703	0.49	—	—
j9e037gnq	-24.12	08-02-2006	—	—	j9e037ggq	-24.11	08-02-2006	—	—	—	—
j9e038k1q	-23.31	09-02-2006	—	—	j9e038juq	-23.31	09-02-2006	29.933	2.05	—	—
j9e039m9q	-22.50	10-02-2006	—	—	j9e039m2q	-22.51	10-02-2006	—	—	—	—
j9e040q6q	-21.65	10-02-2006	—	—	j9e040pzq	-21.65	10-02-2006	—	—	—	—
j9e041rwq	-20.85	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	-20.03	12-02-2006	—	—	j9e042u1q	-19.99	12-02-2006	27.703	0.61	—	—
j9e043dmq	-19.18	13-02-2006	—	—	j9e043dfq	-19.18	13-02-2006	—	—	—	—
j9e044h0q	-18.38	14-02-2006	—	—	j9e044gtq	-18.38	14-02-2006	28.573	1.04	—	—
j9e045j6q	-17.57	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-16.77	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	-15.97	16-02-2006	—	—	j9e047ogq	-15.97	16-02-2006	—	—	—	—
j9e068qxq	-15.17	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	-14.37	18-02-2006	—	—	j9e073t8q	-14.37	18-02-2006	28.553	1.03	—	—
j9e076v4q	-13.43	19-02-2006	—	—	j9e076uxq	-13.40	19-02-2006	—	—	—	—
j9e086aoq	-12.44	20-02-2006	—	—	j9e086ahq	-12.40	20-02-2006	—	—	—	—
j9e092e9q	-11.57	21-02-2006	—	—	j9e092e2q	-11.53	20-02-2006	28.453	0.95	—	—
j9e048fzq	-10.98	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	-10.73	21-02-2006	28.043	0.942	—	—	—	—	—	—	—
j9e049wmq	-5.91	26-02-2006	24.802	0.063	j9e049wfq	-5.87	26-02-2006	25.243	0.07	-0.441	0.094
j9e0a1bhq	-5.07	27-02-2006	25.304	0.069	j9e0a6fzq	-5.07	01-03-2006	25.263	0.08	0.041	0.106
j9e0a5drq	-4.25	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	-3.46	01-03-2006	25.102	0.071	j9e0b8jvq	-3.46	02-03-2006	24.873	0.06	0.229	0.093
j9e0b8k2q	-2.44	02-03-2006	25.037	0.078	j9e0a8otq	-2.41	03-03-2006	24.563	0.04	0.474	0.088
j9e0a8p0q	-1.33	03-03-2006	24.931	0.064	j9e050tqq	-1.34	04-03-2006	24.533	0.04	0.398	0.075
j9e050txq	0.00	04-03-2006	24.144	0.033	j9e0c4cbq	0.00	05-03-2006	23.693	0.02	0.451	0.039
j9e0c4xiq	0.87	05-03-2006	24.353	0.036	j9e0a1baq	0.86	27-02-2007	23.953	0.03	0.400	0.047
M87 Nova 23											
j9e001zdq	-50.00	24-12-2005	26.472	0.287	j9e001z6q	-50.00	24-12-2005	27.723	0.64	-1.251	0.701
j9e002hgq	-45.06	29-12-2005	26.432	0.244	j9e002h9q	-45.02	29-12-2005	27.303	0.45	-0.871	0.512
j9e003d6q	-40.00	03-01-2006	26.593	0.339	j9e003czq	-38.96	03-01-2006	29.493	1.67	-2.900	1.704
j9e004atq	-34.75	08-01-2006	26.171	0.182	j9e004amq	-33.76	08-01-2006	27.293	0.48	-1.122	0.513
j9e005d7q	-33.89	09-01-2006	26.101	0.205	j9e005d0q	-32.89	09-01-2006	26.583	0.23	-0.482	0.308
j9e006j4q	-32.63	10-01-2006	25.864	0.138	j9e006ixq	-31.69	10-01-2006	26.223	0.22	-0.359	0.260
j9e007lwq	-31.50	11-01-2006	25.645	0.127	j9e007lpq	-30.50	11-01-2006	25.773	0.15	-0.128	0.197
j9e008orq	-30.63	12-01-2006	25.112	0.089	—	—	—	—	—	—	—
j9e009qlq	-29.90	13-01-2006	24.892	0.069	j9e009geq	-28.89	13-01-2006	24.753	0.06	0.139	0.091
j9e010sgq	-29.09	14-01-2006	24.745	0.048	j9e010s9q	-28.09	13-01-2006	24.493	0.05	0.252	0.069
j9e011uaq	-28.14	14-01-2006	24.410	0.040	j9e011u3q	-27.10	14-01-2006	24.213	0.04	0.197	0.057

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e012wzq	-27.34	15-01-2006	24.159	0.034	j9e012wsq	-26.30	15-01-2006	23.953	0.03	0.206	0.045
j9e013ceq	-26.50	16-01-2006	—	—	j9e013c7q	-25.50	16-01-2006	24.073	0.03	—	—
j9e014enq	-25.62	17-01-2006	25.197	0.069	j9e014egq	-24.63	17-01-2006	24.713	0.05	0.484	0.085
j9e015iyq	-24.62	18-01-2006	25.683	0.117	j9e015irq	-23.63	18-01-2006	25.333	0.10	0.350	0.154
j9e016m9q	-23.62	19-01-2006	25.723	0.129	—	—	—	—	—	—	—
j9e017orq	-22.56	20-01-2006	26.277	0.187	j9e017okq	-21.57	20-01-2006	25.903	0.15	0.374	0.240
j9e018r9q	-21.62	21-01-2006	26.204	0.192	j9e018r2q	-20.64	21-01-2006	25.923	0.16	0.281	0.250
j9e019umq	-20.62	22-01-2006	25.701	0.129	j9e019ufq	-19.64	22-01-2006	25.413	0.10	0.288	0.163
j9e020cdq	-19.56	23-01-2006	25.783	0.127	j9e020c6q	-18.57	23-01-2006	25.693	0.13	0.090	0.182
j9e021f9q	-18.55	24-01-2006	26.062	0.152	j9e021f2q	-17.51	24-01-2006	26.093	0.19	-0.031	0.243
j9e022hlq	-17.55	25-01-2006	26.134	0.174	j9e022heq	-16.51	25-01-2006	26.903	0.38	-0.769	0.418
j9e023llq	-16.55	26-01-2006	27.598	0.700	j9e023leq	-15.51	26-01-2006	27.233	0.46	0.365	0.838
j9e024p5q	-15.61	27-01-2006	26.504	0.243	j9e024oyq	-14.58	27-01-2006	27.093	0.44	-0.589	0.503
j9e025sdq	-14.61	28-01-2006	—	—	j9e025s6q	-13.58	28-01-2006	—	—	—	—
j9e026vxq	-13.61	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-12.68	30-01-2006	26.373	0.207	j9e027beq	-11.71	30-01-2006	26.933	0.33	-0.560	0.390
j9e028ejq	-11.62	31-01-2006	26.078	0.210	j9e028ecq	-10.58	31-01-2006	27.283	0.47	-1.205	0.515
j9e029h6q	-10.70	01-02-2006	26.235	0.219	j9e029gzq	-9.71	01-02-2006	27.223	0.43	-0.988	0.483
j9e030khq	-9.70	02-02-2006	27.188	0.440	j9e030kaq	-8.71	02-02-2006	27.643	0.65	-0.455	0.785
j9e031ndq	-8.76	03-02-2006	26.813	0.315	j9e031n6q	-7.76	03-02-2006	28.903	1.30	-2.090	1.338
j9e032pxq	-7.82	04-02-2006	26.767	0.340	—	—	—	—	—	—	—
j9e033smq	-7.02	05-02-2006	26.730	0.332	j9e033sfq	-6.03	05-02-2006	27.933	0.69	-1.203	0.766
j9e034w9q	-5.23	05-02-2006	26.816	0.314	—	—	—	—	—	—	—
j9e035bkq	-4.31	06-02-2006	26.801	0.255	j9e035bdq	-4.31	06-02-2006	—	—	—	—
j9e036dbq	-3.49	07-02-2006	26.620	0.295	j9e036d4q	-3.45	07-02-2006	—	—	—	—
j9e037gnq	-2.65	08-02-2006	26.515	0.277	j9e037ggq	-2.64	08-02-2006	—	—	—	—
j9e038k1q	-1.84	09-02-2006	26.302	0.172	j9e038juq	-1.84	09-02-2006	27.383	0.53	-1.081	0.557
j9e039m9q	-1.03	10-02-2006	26.750	0.277	j9e039m2q	-1.04	10-02-2006	29.243	1.54	-2.493	1.565
j9e040q6q	-0.18	10-02-2006	26.235	0.189	j9e040pzq	-0.18	10-02-2006	—	—	—	—
j9e041rwq	0.62	11-02-2006	26.586	0.285	—	—	—	—	—	—	—
j9e042u8q	1.44	12-02-2006	26.793	0.289	j9e042u1q	1.48	12-02-2006	27.523	0.57	-0.730	0.639
j9e043dmq	2.29	13-02-2006	27.168	0.558	j9e043dfq	2.29	13-02-2006	—	—	—	—
j9e044h0q	3.09	14-02-2006	26.313	0.232	j9e044gtq	3.09	14-02-2006	27.663	0.59	-1.350	0.634
j9e045j6q	3.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	4.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	5.50	16-02-2006	26.301	0.232	j9e047ogq	5.50	16-02-2006	28.363	1.02	-2.062	1.046
j9e068qxq	6.30	17-02-2006	26.334	0.222	—	—	—	—	—	—	—
j9e073tfq	7.10	18-02-2006	26.808	0.324	j9e073t8q	7.10	18-02-2006	—	—	—	—
j9e076v4q	8.04	19-02-2006	26.947	0.361	j9e076uxq	8.07	19-02-2006	—	—	—	—
j9e086aoq	9.03	20-02-2006	26.956	0.419	j9e086ahq	9.07	20-02-2006	—	—	—	—
j9e092e9q	9.90	21-02-2006	26.641	0.285	j9e092e2q	9.94	20-02-2006	28.473	1.06	-1.832	1.098
j9e048fzq	10.49	21-02-2006	26.827	0.299	—	—	—	—	—	—	—
j9e094giq	10.74	21-02-2006	27.083	0.406	—	—	—	—	—	—	—
j9e049wmq	15.56	26-02-2006	25.978	0.178	j9e049wfq	15.60	26-02-2006	—	—	—	—
j9e0a1bhq	16.40	27-02-2006	27.012	0.374	j9e0a6fzq	16.40	01-03-2006	—	—	—	—
j9e0a5drq	17.22	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	18.01	01-03-2006	26.425	0.209	j9e0b8jvq	18.01	02-03-2006	—	—	—	—
j9e0b8k2q	19.03	02-03-2006	27.417	0.539	j9e0a8otq	19.06	03-03-2006	—	—	—	—
j9e0a8p0q	20.14	03-03-2006	26.767	0.296	j9e050tqq	20.13	04-03-2006	—	—	—	—
j9e050txq	21.47	04-03-2006	26.551	0.231	j9e0c4cbq	21.47	05-03-2006	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e0c4xiq	22.34	05-03-2006	27.073	0.447	j9e0a1baq	22.33	27-02-2007	—	—	—	—
M87 Nova 24											
j9e001zdq	0.00	24-12-2005	24.187	0.075	j9e001z6q	0.00	24-12-2005	24.651	0.08	-0.464	0.113
j9e002hgq	4.94	29-12-2005	24.519	0.108	j9e002h9q	4.98	29-12-2005	25.314	0.13	-0.795	0.165
j9e003d6q	10.00	03-01-2006	24.940	0.188	j9e003czq	11.04	03-01-2006	25.271	0.11	-0.331	0.220
j9e004atq	15.25	08-01-2006	25.230	0.209	j9e004amq	16.24	08-01-2006	25.324	0.13	-0.094	0.248
j9e005d7q	16.11	09-01-2006	26.273	0.518	j9e005d0q	17.11	09-01-2006	25.598	0.16	0.675	0.542
j9e006j4q	17.37	10-01-2006	25.557	0.248	j9e006ixq	18.31	10-01-2006	25.970	0.24	-0.413	0.344
j9e007lwq	18.50	11-01-2006	25.381	0.240	j9e007lpq	19.50	11-01-2006	26.391	0.35	-1.010	0.424
j9e008orq	19.37	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	20.10	13-01-2006	25.207	0.200	j9e009geq	21.11	13-01-2006	26.237	0.33	-1.030	0.384
j9e010sgq	20.91	14-01-2006	—	—	j9e010s9q	21.91	13-01-2006	25.352	0.17	—	—
j9e011uaq	21.86	14-01-2006	25.277	0.233	j9e011u3q	22.90	14-01-2006	25.800	0.22	-0.523	0.320
j9e012wzq	22.66	15-01-2006	25.376	0.213	j9e012wsq	23.70	15-01-2006	26.264	0.35	-0.888	0.407
j9e013ceq	23.50	16-01-2006	—	—	j9e013c7q	24.50	16-01-2006	25.730	0.19	—	—
j9e014enq	24.38	17-01-2006	26.409	0.543	j9e014egq	25.37	17-01-2006	25.683	0.17	0.726	0.569
j9e015iyq	25.38	18-01-2006	25.506	0.250	j9e015irq	26.37	18-01-2006	26.224	0.28	-0.718	0.375
j9e016m9q	26.38	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	27.44	20-01-2006	26.264	0.474	j9e017okq	28.43	20-01-2006	25.932	0.25	0.332	0.535
j9e018r9q	28.38	21-01-2006	25.956	0.264	j9e018r2q	29.36	21-01-2006	25.837	0.23	0.119	0.348
j9e019umq	29.38	22-01-2006	25.861	0.331	j9e019ufq	30.36	22-01-2006	25.704	0.20	0.157	0.389
j9e020cdq	30.44	23-01-2006	26.463	0.564	j9e020c6q	31.43	23-01-2006	26.060	0.31	0.403	0.645
j9e021f9q	31.45	24-01-2006	—	—	j9e021f2q	32.49	24-01-2006	25.718	0.21	—	—
j9e022hlq	32.45	25-01-2006	—	—	j9e022heq	33.49	25-01-2006	25.988	0.26	—	—
j9e023llq	33.45	26-01-2006	—	—	j9e023leq	34.49	26-01-2006	26.252	0.35	—	—
j9e024p5q	34.39	27-01-2006	—	—	j9e024oyq	35.42	27-01-2006	25.916	0.22	—	—
j9e025sdq	35.39	28-01-2006	—	—	j9e025s6q	36.42	28-01-2006	27.122	0.69	—	—
j9e026vxq	36.39	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	37.32	30-01-2006	—	—	j9e027beq	38.29	30-01-2006	25.661	0.18	—	—
j9e028ejq	38.38	31-01-2006	—	—	j9e028ecq	39.42	31-01-2006	25.915	0.27	—	—
j9e029h6q	39.30	01-02-2006	—	—	j9e029gzq	40.29	01-02-2006	25.630	0.16	—	—
j9e030khq	40.30	02-02-2006	—	—	j9e030kaq	41.29	02-02-2006	26.262	0.32	—	—
j9e031ndq	41.24	03-02-2006	—	—	j9e031n6q	42.24	03-02-2006	26.227	0.29	—	—
j9e032pxq	42.18	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	42.98	05-02-2006	—	—	j9e033sfq	43.97	05-02-2006	25.958	0.24	—	—
j9e034w9q	44.77	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	45.69	06-02-2006	—	—	j9e035bdq	45.69	06-02-2006	26.056	0.26	—	—
j9e036dbq	46.51	07-02-2006	—	—	j9e036d4q	46.55	07-02-2006	25.547	0.18	—	—
j9e037gnq	47.35	08-02-2006	—	—	j9e037ggq	47.36	08-02-2006	26.219	0.31	—	—
j9e038klq	48.16	09-02-2006	—	—	j9e038juq	48.16	09-02-2006	26.485	0.36	—	—
j9e039m9q	48.97	10-02-2006	—	—	j9e039m2q	48.96	10-02-2006	26.291	0.37	—	—
j9e040q6q	49.82	10-02-2006	—	—	j9e040pzq	49.82	10-02-2006	25.889	0.21	—	—
j9e041rwq	50.62	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	51.44	12-02-2006	—	—	j9e042u1q	51.48	12-02-2006	25.613	0.16	—	—
j9e043dmq	52.29	13-02-2006	—	—	j9e043dfq	52.29	13-02-2006	26.187	0.30	—	—
j9e044h0q	53.09	14-02-2006	—	—	j9e044gtq	53.09	14-02-2006	25.531	0.19	—	—
j9e045j6q	53.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	54.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	55.50	16-02-2006	—	—	j9e047ogq	55.50	16-02-2006	26.477	0.30	—	—
j9e068qxq	56.30	17-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e073tfq	57.10	18-02-2006	—	—	j9e073t8q	57.10	18-02-2006	26.029	0.24	—	—
j9e076v4q	58.04	19-02-2006	—	—	j9e076uxq	58.07	19-02-2006	26.427	0.33	—	—
j9e086aoq	59.03	20-02-2006	—	—	j9e086ahq	59.07	20-02-2006	26.286	0.31	—	—
j9e092e9q	59.90	21-02-2006	—	—	j9e092e2q	59.94	20-02-2006	26.181	0.32	—	—
j9e048fzq	60.49	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	60.74	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	65.56	26-02-2006	—	—	j9e049wfq	65.60	26-02-2006	26.224	0.31	—	—
j9e0a1bhq	66.40	27-02-2006	—	—	j9e0a6fzq	66.40	01-03-2006	25.901	0.22	—	—
j9e0a5drq	67.22	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	68.01	01-03-2006	—	—	j9e0b8jvq	68.01	02-03-2006	26.239	0.36	—	—
j9e0b8k2q	69.03	02-03-2006	—	—	j9e0a8otq	69.06	03-03-2006	26.230	0.28	—	—
j9e0a8p0q	70.14	03-03-2006	—	—	j9e050tqq	70.13	04-03-2006	25.852	0.23	—	—
j9e050txq	71.47	04-03-2006	—	—	j9e0c4cbq	71.47	05-03-2006	26.096	0.30	—	—
j9e0c4xiq	72.34	05-03-2006	—	—	j9e0a1baq	72.33	27-02-2007	26.330	0.31	—	—
M87 Nova 25											
j9e001zdq	-4.54	24-12-2005	—	—	j9e001z6q	-4.54	24-12-2005	—	—	—	—
j9e002hggq	0.40	29-12-2005	24.265	0.033	j9e002h9q	0.44	29-12-2005	24.063	0.03	0.202	0.045
j9e003d6q	5.46	03-01-2006	24.779	0.052	j9e003czq	6.50	03-01-2006	24.093	0.03	0.686	0.060
j9e004atq	10.71	08-01-2006	25.261	0.068	j9e004amq	11.70	08-01-2006	24.833	0.06	0.428	0.091
j9e005d7q	11.57	09-01-2006	24.706	0.045	j9e005d0q	12.57	09-01-2006	24.433	0.04	0.273	0.060
j9e006j4q	12.83	10-01-2006	24.866	0.048	j9e006ixq	13.77	10-01-2006	24.473	0.04	0.393	0.062
j9e007lwq	13.96	11-01-2006	25.104	0.064	j9e007lpq	14.96	11-01-2006	24.493	0.04	0.611	0.075
j9e008orq	14.83	12-01-2006	25.228	0.066	—	—	—	—	—	—	—
j9e009qlq	15.56	13-01-2006	25.061	0.065	j9e009geq	16.57	13-01-2006	24.733	0.05	0.328	0.082
j9e010sgq	16.37	14-01-2006	25.358	0.090	j9e010s9q	17.37	13-01-2006	25.053	0.06	0.305	0.108
j9e011uag	17.32	14-01-2006	25.274	0.070	j9e011u3q	18.36	14-01-2006	25.023	0.07	0.251	0.099
j9e012wzq	18.12	15-01-2006	25.605	0.095	j9e012wsq	19.16	15-01-2006	25.093	0.07	0.512	0.118
j9e013ceq	18.96	16-01-2006	—	—	j9e013c7q	19.96	16-01-2006	25.033	0.07	—	—
j9e014enq	19.84	17-01-2006	25.477	0.083	j9e014egq	20.83	17-01-2006	25.313	0.08	0.164	0.115
j9e015iyq	20.84	18-01-2006	25.510	0.083	j9e015irq	21.83	18-01-2006	25.303	0.10	0.207	0.130
j9e016m9q	21.84	19-01-2006	25.411	0.071	—	—	—	—	—	—	—
j9e017orq	22.90	20-01-2006	25.732	0.109	j9e017okq	23.89	20-01-2006	25.743	0.14	-0.011	0.177
j9e018r9q	23.84	21-01-2006	25.725	0.123	j9e018r2q	24.82	21-01-2006	25.373	0.09	0.352	0.152
j9e019umq	24.84	22-01-2006	—	—	j9e019ufq	25.82	22-01-2006	25.693	0.12	—	—
j9e020cdq	25.90	23-01-2006	25.660	0.087	j9e020c6q	26.89	23-01-2006	25.593	0.11	0.067	0.140
j9e021f9q	26.91	24-01-2006	26.089	0.168	j9e021f2q	27.95	24-01-2006	25.673	0.12	0.416	0.206
j9e022hlq	27.91	25-01-2006	25.353	0.099	j9e022heq	28.95	25-01-2006	25.793	0.15	-0.440	0.180
j9e023llq	28.91	26-01-2006	26.081	0.144	j9e023leq	29.95	26-01-2006	26.113	0.16	-0.032	0.215
j9e024p5q	29.85	27-01-2006	25.800	0.132	j9e024oyq	30.88	27-01-2006	25.963	0.15	-0.163	0.200
j9e025sdq	30.85	28-01-2006	25.966	0.165	j9e025s6q	31.88	28-01-2006	26.133	0.18	-0.167	0.244
j9e026vxq	31.85	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	32.78	30-01-2006	25.863	0.110	j9e027beq	33.75	30-01-2006	26.123	0.16	-0.260	0.194
j9e028ejq	33.84	31-01-2006	26.255	0.198	j9e028ecq	34.88	31-01-2006	26.203	0.16	0.052	0.255
j9e029h6q	34.76	01-02-2006	26.054	0.140	j9e029gzq	35.75	01-02-2006	26.753	0.29	-0.699	0.322
j9e030khq	35.76	02-02-2006	26.472	0.225	j9e030kaq	36.75	02-02-2006	26.523	0.22	-0.051	0.315
j9e031ndq	36.70	03-02-2006	26.002	0.134	j9e031n6q	37.70	03-02-2006	27.143	0.39	-1.141	0.412
j9e032pxq	37.64	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	38.44	05-02-2006	26.510	0.212	j9e033sfq	39.43	05-02-2006	27.483	0.58	-0.973	0.618
j9e034w9q	40.23	05-02-2006	25.900	0.120	—	—	—	—	—	—	—
j9e035bkq	41.15	06-02-2006	26.142	0.153	j9e035bdq	41.15	06-02-2006	26.823	0.31	-0.681	0.346

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e036dbq	41.97	07-02-2006	26.130	0.185	j9e036d4q	42.01	07-02-2006	27.903	0.73	-1.773	0.753
j9e037gnq	42.81	08-02-2006	26.063	0.128	j9e037ggq	42.82	08-02-2006	26.853	0.30	-0.790	0.326
j9e038k1q	43.62	09-02-2006	26.098	0.142	j9e038juq	43.62	09-02-2006	26.583	0.25	-0.485	0.288
j9e039m9q	44.43	10-02-2006	27.156	0.387	j9e039m2q	44.42	10-02-2006	27.133	0.40	0.023	0.557
j9e040q6q	45.28	10-02-2006	26.576	0.252	j9e040pzq	45.28	10-02-2006	27.683	0.55	-1.107	0.605
j9e041rwq	46.08	11-02-2006	26.108	0.182	—	—	—	—	—	—	—
j9e042u8q	46.90	12-02-2006	26.001	0.135	j9e042u1q	46.94	12-02-2006	27.483	0.44	-1.482	0.460
j9e043dmq	47.75	13-02-2006	26.445	0.224	j9e043dfq	47.75	13-02-2006	28.523	1.02	-2.078	1.044
j9e044h0q	48.55	14-02-2006	26.555	0.262	j9e044gtq	48.55	14-02-2006	—	—	—	—
j9e045j6q	49.36	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	50.16	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	50.96	16-02-2006	26.508	0.209	j9e047ogq	50.96	16-02-2006	—	—	—	—
j9e068qxq	51.76	17-02-2006	26.248	0.156	—	—	—	—	—	—	—
j9e073tfq	52.56	18-02-2006	26.522	0.192	j9e073t8q	52.56	18-02-2006	27.713	0.58	-1.191	0.611
j9e076v4q	53.50	19-02-2006	27.601	0.711	j9e076uxq	53.53	19-02-2006	—	—	—	—
j9e086aoq	54.49	20-02-2006	27.495	0.658	j9e086ahq	54.53	20-02-2006	28.103	0.91	-0.608	1.123
j9e092e9q	55.36	21-02-2006	26.635	0.218	j9e092e2q	55.40	20-02-2006	—	—	—	—
j9e048fzq	55.95	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	56.20	21-02-2006	26.730	0.253	—	—	—	—	—	—	—
j9e049wmq	61.02	26-02-2006	26.275	0.186	j9e049wfq	61.06	26-02-2006	31.873	3.91	-5.598	3.914
j9e0a1bhq	61.86	27-02-2006	26.656	0.241	j9e0a6fzq	61.86	01-03-2006	—	—	—	—
j9e0a5drq	62.68	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	63.47	01-03-2006	26.825	0.248	j9e0b8jvq	63.47	02-03-2006	28.313	0.84	-1.488	0.876
j9e0b8k2q	64.49	02-03-2006	27.158	0.429	j9e0a8otq	64.52	03-03-2006	—	—	—	—
j9e0a8p0q	65.60	03-03-2006	27.265	0.432	j9e050tqq	65.59	04-03-2006	—	—	—	—
j9e050txq	66.93	04-03-2006	26.227	0.163	j9e0c4cbq	66.93	05-03-2006	—	—	—	—
j9e0c4xiq	67.80	05-03-2006	26.556	0.245	j9e0a1baq	67.79	27-02-2007	29.643	1.80	-3.087	1.817
M87 Nova 26											
j9e001zdq	0.00	24-12-2005	24.376	0.060	j9e001z6q	0.00	24-12-2005	25.931	0.090	-1.554	0.105
j9e002hgq	4.94	29-12-2005	24.692	0.070	j9e002h9q	4.98	29-12-2005	25.951	0.064	-1.258	0.097
j9e003d6q	10.00	03-01-2006	24.603	0.070	j9e003czq	11.04	03-01-2006	25.884	0.063	-1.280	0.091
j9e004atq	15.25	08-01-2006	24.874	0.080	j9e004amq	16.24	08-01-2006	25.932	0.062	-1.057	0.104
j9e005d7q	16.11	09-01-2006	24.876	0.090	j9e005d0q	17.11	09-01-2006	25.885	0.064	-1.008	0.110
j9e006j4q	17.37	10-01-2006	24.853	0.080	j9e006ixq	18.31	10-01-2006	26.142	0.096	-1.288	0.124
j9e007lwq	18.50	11-01-2006	24.957	0.090	j9e007lpq	19.50	11-01-2006	25.848	0.079	-0.890	0.117
j9e008orq	19.37	12-01-2006	24.929	0.080	—	—	—	—	—	—	—
j9e009qlq	20.10	13-01-2006	25.065	0.100	j9e009geq	21.11	13-01-2006	25.838	0.061	-0.772	0.114
j9e010sgq	20.91	14-01-2006	25.042	0.090	j9e010s9q	21.91	13-01-2006	26.098	0.067	-1.055	0.115
j9e011uaq	21.86	14-01-2006	25.025	0.100	j9e011u3q	22.90	14-01-2006	26.129	0.071	-1.103	0.119
j9e012wzq	22.66	15-01-2006	24.958	0.090	j9e012wsq	23.70	15-01-2006	26.144	0.072	-1.185	0.118
j9e013ceq	23.50	16-01-2006	—	—	j9e013c7q	24.50	16-01-2006	26.055	0.066	—	—
j9e014enq	24.38	17-01-2006	24.815	0.080	j9e014egq	25.37	17-01-2006	26.086	0.070	-1.270	0.105
j9e015iyq	25.38	18-01-2006	25.131	0.100	j9e015irq	26.37	18-01-2006	26.450	0.103	-1.318	0.143
j9e016m9q	26.38	19-01-2006	25.044	0.090	—	—	—	—	—	—	—
j9e017orq	27.44	20-01-2006	24.873	0.080	j9e017okq	28.43	20-01-2006	25.983	0.074	-1.109	0.109
j9e018r9q	28.38	21-01-2006	25.195	0.110	j9e018r2q	29.36	21-01-2006	25.931	0.082	-0.735	0.134
j9e019umq	29.38	22-01-2006	25.058	0.100	j9e019ufq	30.36	22-01-2006	26.132	0.090	-1.073	0.132
j9e020cdq	30.44	23-01-2006	25.287	0.110	j9e020c6q	31.43	23-01-2006	26.173	0.083	-0.885	0.140
j9e021f9q	31.45	24-01-2006	25.188	0.110	j9e021f2q	32.49	24-01-2006	26.418	0.098	-1.229	0.144
j9e022hlq	32.45	25-01-2006	25.387	0.130	j9e022heq	33.49	25-01-2006	26.233	0.090	-0.845	0.157

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e023llq	33.45	26-01-2006	24.704	0.070	j9e023leq	34.49	26-01-2006	26.174	0.073	-1.469	0.103
j9e024p5q	34.39	27-01-2006	25.109	0.110	j9e024oyq	35.42	27-01-2006	26.314	0.098	-1.204	0.144
j9e025sdq	35.39	28-01-2006	24.856	0.080	j9e025s6q	36.42	28-01-2006	26.168	0.073	-1.311	0.108
j9e026vxq	36.39	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	37.32	30-01-2006	25.343	0.120	j9e027beq	38.29	30-01-2006	26.375	0.098	-1.031	0.158
j9e028ejq	38.38	31-01-2006	—	—	j9e028ecq	39.42	31-01-2006	26.221	0.079	—	—
j9e029h6q	39.30	01-02-2006	25.257	0.110	j9e029gzq	40.29	01-02-2006	26.594	0.126	-1.336	0.169
j9e030khq	40.30	02-02-2006	25.175	0.110	j9e030kaq	41.29	02-02-2006	26.516	0.103	-1.340	0.149
j9e031ndq	41.24	03-02-2006	25.306	0.110	j9e031n6q	42.24	03-02-2006	26.331	0.107	-1.024	0.156
j9e032pxq	42.18	04-02-2006	25.256	0.110	—	—	—	—	—	—	—
j9e033smq	42.98	05-02-2006	25.551	0.140	j9e033sfq	43.97	05-02-2006	26.312	0.092	-0.760	0.168
j9e034w9q	44.77	05-02-2006	25.295	0.110	—	—	—	—	—	—	—
j9e035bkq	45.69	06-02-2006	25.913	0.200	j9e035bdq	45.69	06-02-2006	26.708	0.118	-0.794	0.229
j9e036dbq	46.51	07-02-2006	25.864	0.210	j9e036d4q	46.55	07-02-2006	26.401	0.094	-0.536	0.227
j9e037gnq	47.35	08-02-2006	25.375	0.120	j9e037ggq	47.36	08-02-2006	26.500	0.099	-1.124	0.157
j9e038klq	48.16	09-02-2006	25.408	0.130	j9e038juq	48.16	09-02-2006	26.541	0.102	-1.132	0.166
j9e039m9q	48.97	10-02-2006	25.455	0.140	j9e039m2q	48.96	10-02-2006	26.304	0.074	-0.848	0.159
j9e040q6q	49.82	10-02-2006	—	—	j9e040pzq	49.82	10-02-2006	26.289	0.090	—	—
j9e041rwq	50.62	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	51.44	12-02-2006	25.432	0.130	j9e042u1q	51.48	12-02-2006	26.447	0.096	-1.014	0.161
j9e043dmq	52.29	13-02-2006	—	—	j9e043dfq	52.29	13-02-2006	26.395	0.092	—	—
j9e044h0q	53.09	14-02-2006	25.556	0.150	j9e044gtq	53.09	14-02-2006	26.728	0.127	-1.171	0.194
j9e045j6q	53.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	54.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	55.50	16-02-2006	—	—	j9e047ogq	55.50	16-02-2006	26.810	0.155	—	—
j9e068qxq	56.30	17-02-2006	25.501	0.130	—	—	—	—	—	—	—
j9e073tfq	57.10	18-02-2006	—	—	j9e073t8q	57.10	18-02-2006	26.480	0.112	—	—
j9e076v4q	58.04	19-02-2006	25.957	0.230	j9e076uxq	58.07	19-02-2006	26.611	0.130	-0.653	0.261
j9e086aoq	59.03	20-02-2006	—	—	j9e086ahq	59.07	20-02-2006	26.721	0.125	—	—
j9e092e9q	59.90	21-02-2006	25.613	0.160	j9e092e2q	59.94	20-02-2006	26.743	0.126	-1.129	0.201
j9e048fzq	60.49	21-02-2006	25.747	0.170	—	—	—	—	—	—	—
j9e094giq	60.74	21-02-2006	25.582	0.140	—	—	—	—	—	—	—
j9e049wmq	65.56	26-02-2006	25.576	0.140	j9e049wfq	65.60	26-02-2006	26.427	0.110	-0.850	0.177
j9e0a1bhq	66.40	27-02-2006	25.582	0.150	j9e0a6fzq	66.40	01-03-2006	26.823	0.133	-1.240	0.198
j9e0a5drq	67.22	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	68.01	01-03-2006	25.716	0.160	j9e0b8jvq	68.01	02-03-2006	27.005	0.152	-1.288	0.219
j9e0b8k2q	69.03	02-03-2006	25.328	0.120	j9e0a8otq	69.06	03-03-2006	26.749	0.142	-1.420	0.185
j9e0a8p0q	70.14	03-03-2006	25.925	0.200	j9e050tqq	70.13	04-03-2006	27.050	0.171	-1.124	0.260
j9e050txq	71.47	04-03-2006	26.179	0.240	j9e0c4cbq	71.47	05-03-2006	26.798	0.145	-0.618	0.281
j9e0c4xiq	72.34	05-03-2006	—	—	j9e0a1baq	72.33	27-02-2007	26.833	0.134	—	—
M87 Nova 27											
j9e001zdq	0.00	24-12-2005	24.927	0.055	j9e001z6q	0.00	24-12-2005	25.003	0.07	-0.076	0.089
j9e002hgq	4.94	29-12-2005	25.370	0.083	j9e002h9q	4.98	29-12-2005	25.603	0.11	-0.233	0.138
j9e003d6q	10.00	03-01-2006	25.721	0.112	j9e003czq	11.04	03-01-2006	25.703	0.13	0.018	0.172
j9e004atq	15.25	08-01-2006	25.162	0.064	j9e004amq	16.24	08-01-2006	25.393	0.10	-0.231	0.119
j9e005d7q	16.11	09-01-2006	25.284	0.085	j9e005d0q	17.11	09-01-2006	25.373	0.08	-0.089	0.117
j9e006j4q	17.37	10-01-2006	25.559	0.092	j9e006ixq	18.31	10-01-2006	26.023	0.15	-0.464	0.176
j9e007lwq	18.50	11-01-2006	25.705	0.108	j9e007lpq	19.50	11-01-2006	26.793	0.26	-1.088	0.282
j9e008orq	19.37	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	20.10	13-01-2006	25.908	0.157	j9e009geq	21.11	13-01-2006	26.943	0.30	-1.035	0.339

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e010sgq	20.91	14-01-2006	26.090	0.134	j9e010s9q	21.91	13-01-2006	26.273	0.16	-0.183	0.209
j9e011uaq	21.86	14-01-2006	26.046	0.156	j9e011u3q	22.90	14-01-2006	26.293	0.18	-0.247	0.238
j9e012wzq	22.66	15-01-2006	25.804	0.139	j9e012wsq	23.70	15-01-2006	26.983	0.33	-1.179	0.358
j9e013ceq	23.50	16-01-2006			j9e013c7q	24.50	16-01-2006	26.613	0.25		
j9e014enq	24.38	17-01-2006	25.980	0.143	j9e014egq	25.37	17-01-2006	26.073	0.15	-0.093	0.207
j9e015iyq	25.38	18-01-2006	26.159	0.182	j9e015irq	26.37	18-01-2006	26.763	0.30	-0.604	0.351
j9e016m9q	26.38	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	27.44	20-01-2006	25.734	0.109	j9e017okq	28.43	20-01-2006	26.753	0.26	-1.019	0.282
j9e018r9q	28.38	21-01-2006	26.508	0.198	j9e018r2q	29.36	21-01-2006	26.873	0.28	-0.365	0.343
j9e019umq	29.38	22-01-2006	26.320	0.191	j9e019ufq	30.36	22-01-2006	27.213	0.40	-0.893	0.443
j9e020cdq	30.44	23-01-2006	26.180	0.195	j9e020c6q	31.43	23-01-2006	—	—	—	—
j9e021f9q	31.45	24-01-2006	25.922	0.108	j9e021f2q	32.49	24-01-2006	—	—	—	—
j9e022hlq	32.45	25-01-2006	25.913	0.126	j9e022heq	33.49	25-01-2006	26.933	0.30	-1.020	0.325
j9e023llq	33.45	26-01-2006	26.107	0.155	j9e023leq	34.49	26-01-2006	27.583	0.54	-1.476	0.562
j9e024p5q	34.39	27-01-2006	26.676	0.265	j9e024oyq	35.42	27-01-2006	27.093	0.39	-0.417	0.472
j9e025sdq	35.39	28-01-2006	26.057	0.160	j9e025s6q	36.42	28-01-2006	28.933	1.19	-2.876	1.201
j9e026vxq	36.39	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	37.32	30-01-2006	26.190	0.151	j9e027beq	38.29	30-01-2006	27.853	0.64	-1.663	0.658
j9e028ejq	38.38	31-01-2006	26.565	0.203	j9e028ecq	39.42	31-01-2006	—	—	—	—
j9e029h6q	39.30	01-02-2006	26.124	0.145	j9e029gzq	40.29	01-02-2006	—	—	—	—
j9e030khq	40.30	02-02-2006	27.122	0.356	j9e030kaq	41.29	02-02-2006	28.993	1.34	-1.871	1.386
j9e031ndq	41.24	03-02-2006	—	—	j9e031n6q	42.24	03-02-2006	29.233	1.41	—	—
j9e032pxq	42.18	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	42.98	05-02-2006	26.557	0.237	j9e033sfq	43.97	05-02-2006	27.753	0.55	-1.196	0.599
j9e034w9q	44.77	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	45.69	06-02-2006	26.315	0.216	j9e035bdq	45.69	06-02-2006	—	—	—	—
j9e036dbq	46.51	07-02-2006	26.914	0.329	j9e036d4q	46.55	07-02-2006	—	—	—	—
j9e037gnq	47.35	08-02-2006	26.002	0.109	j9e037ggq	47.36	08-02-2006	—	—	—	—
j9e038k1q	48.16	09-02-2006	26.322	0.168	j9e038juq	48.16	09-02-2006	—	—	—	—
j9e039m9q	48.97	10-02-2006	—	—	j9e039m2q	48.96	10-02-2006	29.213	1.42	—	—
j9e040q6q	49.82	10-02-2006	26.210	0.149	j9e040pzq	49.82	10-02-2006	—	—	—	—
j9e041rwq	50.62	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	51.44	12-02-2006	26.059	0.133	j9e042u1q	51.48	12-02-2006	—	—	—	—
j9e043dmq	52.29	13-02-2006	26.672	0.268	j9e043dfq	52.29	13-02-2006	—	—	—	—
j9e044h0q	53.09	14-02-2006	26.440	0.197	j9e044gtq	53.09	14-02-2006	—	—	—	—
j9e045j6q	53.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	54.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	55.50	16-02-2006	—	—	j9e047ogq	55.50	16-02-2006	—	—	—	—
j9e068qxq	56.30	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	57.10	18-02-2006	26.501	0.212	j9e073t8q	57.10	18-02-2006	—	—	—	—
j9e076v4q	58.04	19-02-2006	26.486	0.192	j9e076uxq	58.07	19-02-2006	—	—	—	—
j9e086aoq	59.03	20-02-2006	27.029	0.306	j9e086ahq	59.07	20-02-2006	—	—	—	—
j9e092e9q	59.90	21-02-2006	—	—	j9e092e2q	59.94	20-02-2006	—	—	—	—
j9e048fzq	60.49	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	60.74	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	65.56	26-02-2006	—	—	j9e049wfq	65.60	26-02-2006	—	—	—	—
j9e0a1bhq	66.40	27-02-2006	27.192	0.432	j9e0a6fzq	66.40	01-03-2006	—	—	—	—
j9e0a5drq	67.22	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	68.01	01-03-2006	27.544	0.637	j9e0b8jvq	68.01	02-03-2006	—	—	—	—
j9e0b8k2q	69.03	02-03-2006	27.093	0.353	j9e0a8otq	69.06	03-03-2006	28.243	0.79	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e0a8p0q	70.14	03-03-2006	27.049	0.413	j9e050tqq	70.13	04-03-2006	—	—	—	—
j9e050txq	71.47	04-03-2006	27.542	0.493	j9e0c4cbq	71.47	05-03-2006	—	—	—	—
j9e0c4xiq	72.34	05-03-2006	26.721	0.238	j9e0a1baq	72.33	27-02-2007	—	—	—	—
M87 Nova 28											
j9e001zdq	-71.47	24-12-2005	—	—	j9e001z6q	-71.47	24-12-2005	—	—	—	—
j9e002hgq	-66.53	29-12-2005	—	—	j9e002h9q	-66.49	29-12-2005	—	—	—	—
j9e003d6q	-61.47	03-01-2006	—	—	j9e003czq	-60.43	03-01-2006	—	—	—	—
j9e004atq	-56.22	08-01-2006	27.944	0.573	j9e004amq	-55.23	08-01-2006	—	—	—	—
j9e005d7q	-55.36	09-01-2006	27.267	0.236	j9e005d0q	-54.36	09-01-2006	—	—	—	—
j9e006j4q	-54.10	10-01-2006	27.288	0.293	j9e006ixq	-53.16	10-01-2006	—	—	—	—
j9e007lwq	-52.97	11-01-2006	27.866	0.406	j9e007lpq	-51.97	11-01-2006	—	—	—	—
j9e008orq	-52.10	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-51.37	13-01-2006	—	—	j9e009geq	-50.36	13-01-2006	29.038	0.73	—	—
j9e010sgq	-50.56	14-01-2006	26.715	0.129	j9e010s9q	-49.56	13-01-2006	27.629	0.29	-0.914	0.319
j9e011uaq	-49.61	14-01-2006	26.569	0.144	j9e011u3q	-48.57	14-01-2006	26.797	0.13	-0.228	0.197
j9e012wzq	-48.81	15-01-2006	26.906	0.180	j9e012wsq	-47.77	15-01-2006	26.885	0.13	0.021	0.223
j9e013ceq	-47.97	16-01-2006	—	—	j9e013c7q	-46.97	16-01-2006	26.750	0.13	—	—
j9e014enq	-47.09	17-01-2006	26.000	0.092	j9e014egq	-46.10	17-01-2006	26.630	0.11	-0.630	0.146
j9e015iyq	-46.09	18-01-2006	26.218	0.087	j9e015irq	-45.10	18-01-2006	26.481	0.10	-0.263	0.135
j9e016m9q	-45.09	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-44.03	20-01-2006	26.145	0.097	j9e017okq	-43.04	20-01-2006	26.416	0.10	-0.271	0.139
j9e018r9q	-43.09	21-01-2006	26.276	0.108	j9e018r2q	-42.11	21-01-2006	26.575	0.12	-0.299	0.164
j9e019umq	-42.09	22-01-2006	26.290	0.103	j9e019ufq	-41.11	22-01-2006	26.413	0.09	-0.123	0.137
j9e020cdq	-41.03	23-01-2006	26.250	0.109	j9e020c6q	-40.04	23-01-2006	26.374	0.08	-0.124	0.136
j9e021f9q	-40.02	24-01-2006	—	—	j9e021f2q	-38.98	24-01-2006	26.415	0.09	—	—
j9e022hlq	-39.02	25-01-2006	25.936	0.113	j9e022heq	-37.98	25-01-2006	26.261	0.08	-0.325	0.138
j9e023llq	-38.02	26-01-2006	—	—	j9e023leq	-36.98	26-01-2006	26.361	0.08	—	—
j9e024p5q	-37.08	27-01-2006	25.774	0.088	j9e024oyq	-36.05	27-01-2006	26.546	0.09	-0.772	0.126
j9e025sdq	-36.08	28-01-2006	—	—	j9e025s6q	-35.05	28-01-2006	25.970	0.06	—	—
j9e026vxq	-35.08	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-34.15	30-01-2006	25.698	0.057	j9e027beq	-33.18	30-01-2006	26.091	0.06	-0.393	0.085
j9e028ejq	-33.09	31-01-2006	25.738	0.072	j9e028ecq	-32.05	31-01-2006	25.895	0.06	-0.157	0.092
j9e029h6q	-32.17	01-02-2006	25.639	0.063	j9e029gzq	-31.18	01-02-2006	25.988	0.06	-0.349	0.088
j9e030khq	-31.17	02-02-2006	25.750	0.082	j9e030kaq	-30.18	02-02-2006	26.012	0.06	-0.262	0.103
j9e031ndq	-30.23	03-02-2006	25.754	0.064	j9e031n6q	-29.23	03-02-2006	26.212	0.07	-0.458	0.097
j9e032pxq	-29.29	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	-28.49	05-02-2006	25.610	0.057	j9e033sfq	-27.50	05-02-2006	26.130	0.07	-0.520	0.091
j9e034w9q	-26.70	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	-25.78	06-02-2006	25.654	0.056	j9e035bdq	-25.78	06-02-2006	26.105	0.07	-0.451	0.086
j9e036dbq	-24.96	07-02-2006	25.548	0.067	j9e036d4q	-24.92	07-02-2006	26.152	0.07	-0.604	0.095
j9e037gnq	-24.12	08-02-2006	25.553	0.060	j9e037ggq	-24.11	08-02-2006	26.063	0.07	-0.510	0.090
j9e038klq	-23.31	09-02-2006	25.436	0.059	j9e038juq	-23.31	09-02-2006	25.938	0.06	-0.502	0.084
j9e039m9q	-22.50	10-02-2006	—	—	j9e039m2q	-22.51	10-02-2006	25.736	0.05	—	—
j9e040q6q	-21.65	10-02-2006	25.580	0.070	j9e040pzq	-21.65	10-02-2006	26.191	0.07	-0.611	0.100
j9e041rwq	-20.85	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	-20.03	12-02-2006	25.571	0.062	j9e042u1q	-19.99	12-02-2006	25.951	0.06	-0.380	0.087
j9e043dmq	-19.18	13-02-2006	25.551	0.057	j9e043dfq	-19.18	13-02-2006	26.035	0.07	-0.484	0.088
j9e044h0q	-18.38	14-02-2006	25.599	0.064	j9e044gtq	-18.38	14-02-2006	26.064	0.07	-0.465	0.093
j9e045j6q	-17.57	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-16.77	15-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e047onq	-15.97	16-02-2006	—	—	j9e047ogq	-15.97	16-02-2006	25.795	0.06	—	—
j9e068qxq	-15.17	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	-14.37	18-02-2006	25.497	0.053	j9e073t8q	-14.37	18-02-2006	25.663	0.05	-0.166	0.071
j9e076v4q	-13.43	19-02-2006	25.486	0.060	j9e076uxq	-13.40	19-02-2006	25.749	0.05	-0.263	0.078
j9e086aoq	-12.44	20-02-2006	25.484	0.064	j9e086ahq	-12.40	20-02-2006	26.100	0.07	-0.616	0.096
j9e092e9q	-11.57	21-02-2006	25.531	0.059	j9e092e2q	-11.53	20-02-2006	26.250	0.07	-0.719	0.094
j9e048fzq	-10.98	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	-10.73	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	-5.91	26-02-2006	25.382	0.047	j9e049wfq	-5.87	26-02-2006	26.034	0.07	-0.652	0.083
j9e0a1bhq	-5.07	27-02-2006	25.595	0.078	j9e0a6fzq	-5.07	01-03-2006	26.050	0.07	-0.455	0.108
j9e0a5drq	-4.25	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	-3.46	01-03-2006	25.569	0.063	j9e0b8jvq	-3.46	02-03-2006	—	—	—	—
j9e0b8k2q	-2.44	02-03-2006	25.541	0.060	j9e0a8otq	-2.41	03-03-2006	25.932	0.06	-0.391	0.083
j9e0a8p0q	-1.33	03-03-2006	25.663	0.070	j9e050tqq	-1.34	04-03-2006	26.043	0.07	-0.380	0.098
j9e050txq	0.00	04-03-2006	25.178	0.046	j9e0c4cbq	0.00	05-03-2006	25.923	0.07	-0.745	0.080
j9e0c4xiq	0.87	05-03-2006	25.271	0.041	j9e0a1baq	0.86	27-02-2007	25.767	0.05	-0.496	0.068
M87 Nova 29											
j9e001zdq	0.00	24-12-2005	25.187	0.055	j9e001z6q	0.00	24-12-2005	24.753	0.04	0.434	0.068
j9e002hggq	4.94	29-12-2005	25.464	0.068	j9e002h9q	4.98	29-12-2005	25.253	0.06	0.211	0.091
j9e003d6q	10.00	03-01-2006	26.087	0.107	j9e003czq	11.04	03-01-2006	25.653	0.09	0.434	0.140
j9e004atq	15.25	08-01-2006	—	—	j9e004amq	16.24	08-01-2006	26.093	0.13	—	—
j9e005d7q	16.11	09-01-2006	26.290	0.144	j9e005d0q	17.11	09-01-2006	26.423	0.17	-0.133	0.223
j9e006j4q	17.37	10-01-2006	26.186	0.114	j9e006ixq	18.31	10-01-2006	26.183	0.11	0.003	0.158
j9e007lwq	18.50	11-01-2006	—	—	j9e007lpq	19.50	11-01-2006	26.493	0.19	—	—
j9e008orq	19.37	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	20.10	13-01-2006	—	—	j9e009geq	21.11	13-01-2006	—	—	—	—
j9e010sgq	20.91	14-01-2006	26.708	0.165	j9e010s9q	21.91	13-01-2006	27.433	0.36	-0.725	0.396
j9e011uaq	21.86	14-01-2006	26.727	0.196	j9e011u3q	22.90	14-01-2006	26.443	0.17	0.284	0.259
j9e012wzq	22.66	15-01-2006	26.542	0.175	j9e012wsq	23.70	15-01-2006	26.563	0.19	-0.021	0.258
j9e013ceq	23.50	16-01-2006	—	—	j9e013c7q	24.50	16-01-2006	26.523	0.19	—	—
j9e014enq	24.38	17-01-2006	26.404	0.159	j9e014egq	25.37	17-01-2006	27.793	0.45	-1.389	0.477
j9e015iyq	25.38	18-01-2006	—	—	j9e015irq	26.37	18-01-2006	26.683	0.18	—	—
j9e016m9q	26.38	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	27.44	20-01-2006	27.634	0.475	j9e017okq	28.43	20-01-2006	26.733	0.18	0.901	0.508
j9e018r9q	28.38	21-01-2006	26.814	0.226	j9e018r2q	29.36	21-01-2006	26.713	0.22	0.101	0.315
j9e019umq	29.38	22-01-2006	—	—	j9e019ufq	30.36	22-01-2006	28.053	0.55	—	—
j9e020cdq	30.44	23-01-2006	26.757	0.181	j9e020c6q	31.43	23-01-2006	26.923	0.25	-0.166	0.309
j9e021f9q	31.45	24-01-2006	26.438	0.137	j9e021f2q	32.49	24-01-2006	28.043	0.54	-1.605	0.557
j9e022hlq	32.45	25-01-2006	28.152	0.761	j9e022heq	33.49	25-01-2006	27.743	0.49	0.409	0.905
j9e023llq	33.45	26-01-2006	27.185	0.215	j9e023leq	34.49	26-01-2006	30.483	2.12	-3.298	2.131
j9e024p5q	34.39	27-01-2006	28.115	0.659	j9e024oyq	35.42	27-01-2006	28.033	0.61	0.082	0.898
j9e025sdq	35.39	28-01-2006	—	—	j9e025s6q	36.42	28-01-2006	27.073	0.26	—	—
j9e026vxq	36.39	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	37.32	30-01-2006	27.040	0.281	j9e027beq	38.29	30-01-2006	29.723	1.67	-2.683	1.693
j9e028ejq	38.38	31-01-2006	26.783	0.208	j9e028ecq	39.42	31-01-2006	27.683	0.43	-0.900	0.478
j9e029h6q	39.30	01-02-2006	28.450	0.994	j9e029gzq	40.29	01-02-2006	—	—	—	—
j9e030khq	40.30	02-02-2006	27.601	0.445	j9e030kaq	41.29	02-02-2006	—	—	—	—
j9e031ndq	41.24	03-02-2006	—	—	j9e031n6q	42.24	03-02-2006	—	—	—	—
j9e032pxq	42.18	04-02-2006	—	—	—	—	—	—	—	—	—
j9e033smq	42.98	05-02-2006	—	—	j9e033sfq	43.97	05-02-2006	29.293	1.25	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e034w9q	44.77	05-02-2006	—	—	—	—	—	—	—	—	—
j9e035bkq	45.69	06-02-2006	27.411	0.332	j9e035bdq	45.69	06-02-2006	—	—	—	—
j9e036dbq	46.51	07-02-2006	—	—	j9e036d4q	46.55	07-02-2006	—	—	—	—
j9e037gnq	47.35	08-02-2006	26.937	0.232	j9e037ggq	47.36	08-02-2006	28.373	0.73	-1.436	0.766
j9e038k1q	48.16	09-02-2006	27.230	0.293	j9e038juq	48.16	09-02-2006	—	—	—	—
j9e039m9q	48.97	10-02-2006	27.386	0.344	j9e039m2q	48.96	10-02-2006	—	—	—	—
j9e040q6q	49.82	10-02-2006	26.705	0.209	j9e040pzq	49.82	10-02-2006	28.263	0.63	-1.558	0.664
j9e041rwq	50.62	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	51.44	12-02-2006	—	—	j9e042u1q	51.48	12-02-2006	—	—	—	—
j9e043dmq	52.29	13-02-2006	—	—	j9e043dfq	52.29	13-02-2006	—	—	—	—
j9e044h0q	53.09	14-02-2006	28.261	0.875	j9e044gtq	53.09	14-02-2006	—	—	—	—
j9e045j6q	53.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	54.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	55.50	16-02-2006	—	—	j9e047ogq	55.50	16-02-2006	—	—	—	—
j9e068qxq	56.30	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	57.10	18-02-2006	—	—	j9e073t8q	57.10	18-02-2006	—	—	—	—
j9e076v4q	58.04	19-02-2006	27.743	0.503	j9e076uxq	58.07	19-02-2006	—	—	—	—
j9e086aoq	59.03	20-02-2006	27.795	0.559	j9e086ahq	59.07	20-02-2006	—	—	—	—
j9e092e9q	59.90	21-02-2006	—	—	j9e092e2q	59.94	20-02-2006	—	—	—	—
j9e048fzq	60.49	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	60.74	21-02-2006	—	—	—	—	—	—	—	—	—
j9e049wmq	65.56	26-02-2006	28.280	0.772	j9e049wfq	65.60	26-02-2006	—	—	—	—
j9e0a1bhq	66.40	27-02-2006	—	—	j9e0a6fzq	66.40	01-03-2006	—	—	—	—
j9e0a5drq	67.22	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	68.01	01-03-2006	—	—	j9e0b8jvq	68.01	02-03-2006	—	—	—	—
j9e0b8k2q	69.03	02-03-2006	—	—	j9e0a8otq	69.06	03-03-2006	—	—	—	—
j9e0a8p0q	70.14	03-03-2006	—	—	j9e050tqq	70.13	04-03-2006	—	—	—	—
j9e050txq	71.47	04-03-2006	—	—	j9e0c4cbq	71.47	05-03-2006	—	—	—	—
j9e0c4xiq	72.34	05-03-2006	—	—	j9e0a1baq	72.33	27-02-2007	—	—	—	—
M87 Nova 30											
j9e001zdq	0.00	24-12-2005	25.324	0.067	j9e001z6q	0.00	24-12-2005	25.312	0.06	0.012	0.091
j9e002hgq	4.94	29-12-2005	25.576	0.088	j9e002h9q	4.98	29-12-2005	25.555	0.06	0.021	0.105
j9e003d6q	10.00	03-01-2006	26.349	0.165	j9e003czq	11.04	03-01-2006	26.264	0.10	0.085	0.192
j9e004atq	15.25	08-01-2006	25.861	0.113	j9e004amq	16.24	08-01-2006	25.760	0.08	0.101	0.136
j9e005d7q	16.11	09-01-2006	25.795	0.097	j9e005d0q	17.11	09-01-2006	25.731	0.07	0.064	0.120
j9e006j4q	17.37	10-01-2006	25.957	0.105	j9e006ixq	18.31	10-01-2006	25.894	0.09	0.063	0.136
j9e007lwq	18.50	11-01-2006	26.172	0.138	j9e007lpq	19.50	11-01-2006	25.875	0.09	0.297	0.164
j9e008orq	19.37	12-01-2006	26.074	0.126	—	—	—	—	—	—	—
j9e009qlq	20.10	13-01-2006	25.808	0.092	j9e009geq	21.11	13-01-2006	25.780	0.07	0.028	0.117
j9e010sgq	20.91	14-01-2006	25.566	0.075	j9e010s9q	21.91	13-01-2006	25.898	0.08	-0.332	0.108
j9e011uaq	21.86	14-01-2006	—	—	j9e011u3q	22.90	14-01-2006	25.944	0.08	—	—
j9e012wzq	22.66	15-01-2006	25.719	0.098	j9e012wsq	23.70	15-01-2006	25.904	0.09	-0.185	0.132
j9e013ceq	23.50	16-01-2006	—	—	j9e013c7q	24.50	16-01-2006	26.017	0.09	—	—
j9e014enq	24.38	17-01-2006	25.793	0.101	j9e014egq	25.37	17-01-2006	26.207	0.11	-0.414	0.152
j9e015iyq	25.38	18-01-2006	26.233	0.134	j9e015irq	26.37	18-01-2006	26.174	0.11	0.059	0.172
j9e016m9q	26.38	19-01-2006	25.924	0.104	—	—	—	—	—	—	—
j9e017orq	27.44	20-01-2006	—	—	j9e017okq	28.43	20-01-2006	26.223	0.11	—	—
j9e018r9q	28.38	21-01-2006	26.030	0.110	j9e018r2q	29.36	21-01-2006	25.805	0.09	0.225	0.140
j9e019umq	29.38	22-01-2006	26.251	0.142	j9e019ufq	30.36	22-01-2006	26.146	0.12	0.105	0.188
j9e020cdq	30.44	23-01-2006	—	—	j9e020c6q	31.43	23-01-2006	26.434	0.11	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e021f9q	31.45	24-01-2006	26.331	0.145	j9e021f2q	32.49	24-01-2006	26.133	0.09	0.198	0.171
j9e022hlq	32.45	25-01-2006	26.142	0.133	j9e022heq	33.49	25-01-2006	25.997	0.09	0.145	0.163
j9e023llq	33.45	26-01-2006	26.318	0.159	j9e023leq	34.49	26-01-2006	26.305	0.10	0.013	0.186
j9e024p5q	34.39	27-01-2006	27.276	0.362	j9e024oyq	35.42	27-01-2006	26.536	0.13	0.740	0.383
j9e025sdq	35.39	28-01-2006	26.557	0.192	j9e025s6q	36.42	28-01-2006	26.700	0.14	-0.143	0.237
j9e026vxq	36.39	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	37.32	30-01-2006	26.837	0.243	j9e027beq	38.29	30-01-2006	26.504	0.12	0.333	0.273
j9e028ejq	38.38	31-01-2006	26.341	0.162	j9e028ecq	39.42	31-01-2006	26.524	0.13	-0.183	0.208
j9e029h6q	39.30	01-02-2006	26.757	0.228	j9e029gzq	40.29	01-02-2006	26.687	0.19	0.070	0.294
j9e030khq	40.30	02-02-2006	26.738	0.226	j9e030kaq	41.29	02-02-2006	27.286	0.29	-0.548	0.364
j9e031ndq	41.24	03-02-2006	—	—	j9e031n6q	42.24	03-02-2006	26.498	0.15	—	—
j9e032pxq	42.18	04-02-2006	26.327	0.161	—	—	—	—	—	—	—
j9e033smq	42.98	05-02-2006	26.620	0.196	j9e033sfq	43.97	05-02-2006	26.311	0.11	0.309	0.226
j9e034w9q	44.77	05-02-2006	26.683	0.209	—	—	—	—	—	—	—
j9e035bkq	45.69	06-02-2006	26.919	0.252	j9e035bdq	45.69	06-02-2006	26.483	0.12	0.436	0.280
j9e036dbq	46.51	07-02-2006	26.941	0.293	j9e036d4q	46.55	07-02-2006	26.525	0.12	0.416	0.316
j9e037gnq	47.35	08-02-2006	26.519	0.172	j9e037ggq	47.36	08-02-2006	26.430	0.12	0.089	0.211
j9e038klq	48.16	09-02-2006	26.934	0.268	j9e038juq	48.16	09-02-2006	26.253	0.11	0.681	0.289
j9e039m9q	48.97	10-02-2006	—	—	j9e039m2q	48.96	10-02-2006	26.346	0.11	—	—
j9e040q6q	49.82	10-02-2006	26.585	0.183	j9e040pzq	49.82	10-02-2006	26.407	0.10	0.178	0.210
j9e041rwq	50.62	11-02-2006	26.599	0.195	—	—	—	—	—	—	—
j9e042u8q	51.44	12-02-2006	26.287	0.139	j9e042u1q	51.48	12-02-2006	26.765	0.17	-0.478	0.221
j9e043dmq	52.29	13-02-2006	26.261	0.138	j9e043dfq	52.29	13-02-2006	26.399	0.12	-0.138	0.180
j9e044h0q	53.09	14-02-2006	26.609	0.201	j9e044gtq	53.09	14-02-2006	26.209	0.11	0.400	0.230
j9e045j6q	53.90	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	54.70	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	55.50	16-02-2006	26.469	0.171	j9e047ogq	55.50	16-02-2006	26.399	0.11	0.070	0.204
j9e068qxq	56.30	17-02-2006	26.304	0.146	—	—	—	—	—	—	—
j9e073tfq	57.10	18-02-2006	26.680	0.207	j9e073t8q	57.10	18-02-2006	26.469	0.12	0.211	0.240
j9e076v4q	58.04	19-02-2006	26.977	0.262	j9e076uxq	58.07	19-02-2006	27.309	0.26	-0.332	0.371
j9e086aoq	59.03	20-02-2006	26.973	0.282	j9e086ahq	59.07	20-02-2006	27.317	0.27	-0.344	0.388
j9e092e9q	59.90	21-02-2006	26.984	0.276	j9e092e2q	59.94	20-02-2006	26.436	0.14	0.548	0.311
j9e048fzq	60.49	21-02-2006	—	—	—	—	—	—	—	—	—
j9e094giq	60.74	21-02-2006	26.551	0.167	—	—	—	—	—	—	—
j9e049wmq	65.56	26-02-2006	27.732	0.537	j9e049wfq	65.60	26-02-2006	27.069	0.23	0.663	0.583
j9e0a1bhq	66.40	27-02-2006	—	—	j9e0a6fzq	66.40	01-03-2006	26.710	0.19	—	—
j9e0a5drq	67.22	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	68.01	01-03-2006	27.082	0.279	j9e0b8jvq	68.01	02-03-2006	26.718	0.17	0.364	0.326
j9e0b8k2q	69.03	02-03-2006	—	—	j9e0a8otq	69.06	03-03-2006	26.680	0.14	—	—
j9e0a8p0q	70.14	03-03-2006	27.263	0.365	j9e050tqq	70.13	04-03-2006	26.494	0.14	0.769	0.390
j9e050txq	71.47	04-03-2006	—	—	j9e0c4cbq	71.47	05-03-2006	28.007	0.46	—	—
j9e0c4xiq	72.34	05-03-2006	27.390	0.422	j9e0a1baq	72.33	27-02-2007	27.063	0.19	0.327	0.462
M87 Nova 31											
j9e001zdq	-72.34	24-12-2005	—	—	j9e001z6q	-72.34	24-12-2005	—	—	—	—
j9e002hgq	-67.40	29-12-2005	—	—	j9e002h9q	-67.36	29-12-2005	—	—	—	—
j9e003d6q	-62.34	03-01-2006	—	—	j9e003czq	-61.30	03-01-2006	—	—	—	—
j9e004atq	-57.09	08-01-2006	28.212	0.894	j9e004amq	-56.10	08-01-2006	27.863	0.49	0.349	1.019
j9e005d7q	-56.23	09-01-2006	27.472	0.448	j9e005d0q	-55.23	09-01-2006	—	—	—	—
j9e006j4q	-54.97	10-01-2006	26.724	0.253	j9e006ixq	-54.03	10-01-2006	27.813	0.52	-1.089	0.578
j9e007lwq	-53.84	11-01-2006	26.671	0.236	j9e007lpq	-52.84	11-01-2006	27.303	0.37	-0.632	0.439

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e008orq	-52.97	12-01-2006	—	—	—	—	—	—	—	—	—
j9e009qlq	-52.24	13-01-2006	—	—	j9e009geq	-51.23	13-01-2006	27.173	0.30	—	—
j9e010sgq	-51.43	14-01-2006	26.719	0.213	j9e010s9q	-50.43	13-01-2006	27.393	0.39	-0.674	0.444
j9e011uaq	-50.48	14-01-2006	—	—	j9e011u3q	-49.44	14-01-2006	27.493	0.41	—	—
j9e012wzq	-49.68	15-01-2006	27.180	0.367	j9e012wsq	-48.64	15-01-2006	26.753	0.25	0.427	0.444
j9e013ceq	-48.84	16-01-2006	—	—	j9e013c7q	-47.84	16-01-2006	26.333	0.16	—	—
j9e014enq	-47.96	17-01-2006	27.663	0.616	j9e014egq	-46.97	17-01-2006	26.653	0.25	1.010	0.665
j9e015iyq	-46.96	18-01-2006	27.478	0.461	j9e015irq	-45.97	18-01-2006	26.273	0.19	1.205	0.499
j9e016m9q	-45.96	19-01-2006	—	—	—	—	—	—	—	—	—
j9e017orq	-44.90	20-01-2006	27.539	0.561	j9e017okq	-43.91	20-01-2006	26.263	0.16	1.276	0.583
j9e018r9q	-43.96	21-01-2006	27.530	0.429	j9e018r2q	-42.98	21-01-2006	26.403	0.19	1.127	0.469
j9e019umq	-42.96	22-01-2006	—	—	j9e019ufq	-41.98	22-01-2006	26.433	0.20	—	—
j9e020cdq	-41.90	23-01-2006	—	—	j9e020c6q	-40.91	23-01-2006	26.533	0.19	—	—
j9e021f9q	-40.89	24-01-2006	26.998	0.365	j9e021f2q	-39.85	24-01-2006	27.133	0.35	-0.135	0.506
j9e022hlq	-39.89	25-01-2006	—	—	j9e022heq	-38.85	25-01-2006	25.983	0.14	—	—
j9e023llq	-38.89	26-01-2006	27.755	0.605	j9e023leq	-37.85	26-01-2006	25.913	0.12	1.842	0.617
j9e024p5q	-37.95	27-01-2006	27.187	0.339	j9e024oyq	-36.92	27-01-2006	25.903	0.12	1.284	0.360
j9e025sdq	-36.95	28-01-2006	—	—	j9e025s6q	-35.92	28-01-2006	25.623	0.09	—	—
j9e026vxq	-35.95	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	-35.02	30-01-2006	26.705	0.277	j9e027beq	-34.05	30-01-2006	25.783	0.12	0.922	0.302
j9e028ejq	-33.96	31-01-2006	27.336	0.255	j9e028ecq	-32.92	31-01-2006	26.063	0.16	1.273	0.301
j9e029h6q	-33.04	01-02-2006	26.590	0.244	j9e029gzq	-32.05	01-02-2006	25.683	0.10	0.907	0.264
j9e030khq	-32.04	02-02-2006	26.910	0.248	j9e030kaq	-31.05	02-02-2006	25.723	0.11	1.187	0.271
j9e031ndq	-31.10	03-02-2006	27.062	0.318	j9e031n6q	-30.10	03-02-2006	25.613	0.09	1.449	0.330
j9e032pxq	-30.16	04-02-2006	27.125	0.463	—	—	—	—	—	—	—
j9e033smq	-29.36	05-02-2006	27.874	0.647	j9e033sfq	-28.37	05-02-2006	25.393	0.08	2.481	0.652
j9e034w9q	-27.57	05-02-2006	26.704	0.256	—	—	—	—	—	—	—
j9e035bkq	-26.65	06-02-2006	27.505	0.506	j9e035bdq	-26.65	06-02-2006	25.923	0.12	1.582	0.520
j9e036dbq	-25.83	07-02-2006	26.994	0.309	j9e036d4q	-25.79	07-02-2006	25.483	0.09	1.511	0.322
j9e037gnq	-24.99	08-02-2006	26.441	0.150	j9e037ggq	-24.98	08-02-2006	25.503	0.09	0.938	0.175
j9e038k1q	-24.18	09-02-2006	—	—	j9e038juq	-24.18	09-02-2006	25.303	0.07	—	—
j9e039m9q	-23.37	10-02-2006	26.902	0.313	j9e039m2q	-23.38	10-02-2006	25.383	0.08	1.519	0.323
j9e040q6q	-22.52	10-02-2006	26.968	0.290	j9e040pzq	-22.52	10-02-2006	25.653	0.11	1.315	0.310
j9e041rwq	-21.72	11-02-2006	—	—	—	—	—	—	—	—	—
j9e042u8q	-20.90	12-02-2006	28.021	0.633	j9e042u1q	-20.86	12-02-2006	25.683	0.11	2.338	0.642
j9e043dmq	-20.05	13-02-2006	26.358	0.193	j9e043dfq	-20.05	13-02-2006	25.433	0.09	0.925	0.213
j9e044h0q	-19.25	14-02-2006	26.950	0.223	j9e044gtq	-19.25	14-02-2006	25.233	0.06	1.717	0.231
j9e045j6q	-18.44	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	-17.64	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	-16.84	16-02-2006	26.623	0.250	j9e047ogq	-16.84	16-02-2006	25.483	0.10	1.140	0.269
j9e068qxq	-16.04	17-02-2006	26.448	0.165	—	—	—	—	—	—	—
j9e073tfq	-15.24	18-02-2006	26.966	0.345	j9e073t8q	-15.24	18-02-2006	25.213	0.07	1.753	0.352
j9e076v4q	-14.30	19-02-2006	26.793	0.396	j9e076uxq	-14.27	19-02-2006	25.333	0.08	1.460	0.404
j9e086aoq	-13.31	20-02-2006	28.134	0.973	j9e086ahq	-13.27	20-02-2006	25.663	0.10	2.471	0.978
j9e092e9q	-12.44	21-02-2006	26.311	0.141	j9e092e2q	-12.40	20-02-2006	25.253	0.08	1.058	0.162
j9e048fzq	-11.85	21-02-2006	26.761	0.260	—	—	—	—	—	—	—
j9e094giq	-11.60	21-02-2006	26.514	0.179	—	—	—	—	—	—	—
j9e049wmq	-6.78	26-02-2006	26.856	0.270	j9e049wfq	-6.74	26-02-2006	25.483	0.09	1.373	0.285
j9e0a1bhq	-5.94	27-02-2006	26.957	0.250	j9e0a6fzq	-5.94	01-03-2006	25.163	0.06	1.794	0.257
j9e0a5drq	-5.12	28-02-2006	—	—	—	—	—	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e0a6g6q	-4.33	01-03-2006	26.934	0.316	j9e0b8jvq	-4.33	02-03-2006	25.403	0.08	1.531	0.326
j9e0b8k2q	-3.31	02-03-2006	27.275	0.469	j9e0a8otq	-3.28	03-03-2006	25.023	0.06	2.252	0.473
j9e0a8p0q	-2.20	03-03-2006	26.672	0.221	j9e050tqq	-2.21	04-03-2006	25.013	0.06	1.659	0.229
j9e050txq	-0.87	04-03-2006	27.018	0.256	j9e0c4cbq	-0.87	05-03-2006	25.133	0.06	1.885	0.263
j9e0c4xiq	0.00	05-03-2006	26.295	0.148	j9e0a1baq	-0.01	27-02-2007	25.123	0.07	1.172	0.164
M87 Nova 32											
j9e001zdq	-37.32	24-12-2005	26.921	0.217	j9e001z6q	-37.32	24-12-2005	27.020	0.21	-0.099	0.299
j9e002hgq	-32.38	29-12-2005	26.717	0.160	j9e002h9q	-32.34	29-12-2005	27.350	0.17	-0.633	0.236
j9e003d6q	-27.32	03-01-2006	27.429	0.316	j9e003czq	-26.28	03-01-2006	26.842	0.13	0.587	0.342
j9e004atq	-22.07	08-01-2006	27.225	0.252	j9e004amq	-21.08	08-01-2006	27.024	0.14	0.201	0.290
j9e005d7q	-21.21	09-01-2006	27.165	0.241	j9e005d0q	-20.21	09-01-2006	27.156	0.17	0.009	0.296
j9e006j4q	-19.95	10-01-2006	27.040	0.237	j9e006ixq	-19.01	10-01-2006	26.921	0.16	0.119	0.288
j9e007lwq	-18.82	11-01-2006	27.099	0.223	j9e007lpq	-17.82	11-01-2006	27.563	0.32	-0.464	0.392
j9e008orq	-17.95	12-01-2006	27.130	0.246	—	—	—	—	—	—	—
j9e009qlq	-17.22	13-01-2006	28.225	0.583	j9e009geq	-16.21	13-01-2006	27.112	0.17	1.113	0.607
j9e010sgq	-16.41	14-01-2006	26.888	0.194	j9e010s9q	-15.41	13-01-2006	27.530	0.20	-0.642	0.276
j9e011uaq	-15.46	14-01-2006	—	—	j9e011u3q	-14.42	14-01-2006	27.172	0.14	—	—
j9e012wzq	-14.66	15-01-2006	26.981	0.193	j9e012wsq	-13.62	15-01-2006	27.237	0.18	-0.256	0.263
j9e013ceq	-13.82	16-01-2006	—	—	j9e013c7q	-12.82	16-01-2006	26.868	0.12	—	—
j9e014enq	-12.94	17-01-2006	27.056	0.213	j9e014egq	-11.95	17-01-2006	27.377	0.19	-0.321	0.286
j9e015iyq	-11.94	18-01-2006	26.776	0.178	j9e015irq	-10.95	18-01-2006	27.192	0.18	-0.416	0.256
j9e016m9q	-10.94	19-01-2006	26.669	0.148	—	—	—	—	—	—	—
j9e017orq	-9.88	20-01-2006	27.039	0.212	j9e017okq	-8.89	20-01-2006	27.410	0.22	-0.371	0.306
j9e018r9q	-8.94	21-01-2006	26.724	0.167	j9e018r2q	-7.96	21-01-2006	27.407	0.22	-0.683	0.276
j9e019umq	-7.94	22-01-2006	—	—	j9e019ufq	-6.96	22-01-2006	27.476	0.28	—	—
j9e020cdq	-6.88	23-01-2006	27.017	0.206	j9e020c6q	-5.89	23-01-2006	27.594	0.27	-0.577	0.336
j9e021f9q	-5.87	24-01-2006	26.721	0.174	j9e021f2q	-4.83	24-01-2006	27.546	0.21	-0.825	0.276
j9e022hlq	-4.87	25-01-2006	26.798	0.185	j9e022heq	-3.83	25-01-2006	27.929	0.31	-1.131	0.364
j9e023llq	-3.87	26-01-2006	26.815	0.184	j9e023leq	-2.83	26-01-2006	27.737	0.25	-0.922	0.312
j9e024p5q	-2.93	27-01-2006	26.972	0.224	j9e024oyq	-1.90	27-01-2006	27.624	0.25	-0.652	0.339
j9e025sdq	-1.93	28-01-2006	—	—	j9e025s6q	-0.90	28-01-2006	27.425	0.19	—	—
j9e026vxq	-0.93	29-01-2006	—	—	—	—	—	—	—	—	—
j9e027blq	0.00	30-01-2006	26.326	0.126	j9e027beq	0.97	30-01-2006	27.794	0.30	-1.468	0.325
j9e028ejq	1.06	31-01-2006	26.799	0.187	j9e028ecq	2.10	31-01-2006	27.642	0.24	-0.843	0.300
j9e029h6q	1.98	01-02-2006	26.650	0.151	j9e029gzq	2.97	01-02-2006	27.838	0.40	-1.188	0.431
j9e030khq	2.98	02-02-2006	26.692	0.152	j9e030kaq	3.97	02-02-2006	28.728	0.66	-2.036	0.675
j9e031ndq	3.92	03-02-2006	27.314	0.268	j9e031n6q	4.92	03-02-2006	28.018	0.34	-0.704	0.433
j9e032pxq	4.86	04-02-2006	26.539	0.128	—	—	—	—	—	—	—
j9e033smq	5.66	05-02-2006	—	—	j9e033sfq	6.65	05-02-2006	27.684	0.23	—	—
j9e034w9q	7.45	05-02-2006	26.597	0.142	—	—	—	—	—	—	—
j9e035bkq	8.37	06-02-2006	26.738	0.147	j9e035bdq	8.37	06-02-2006	28.663	0.50	-1.925	0.523
j9e036dbq	9.19	07-02-2006	—	—	j9e036d4q	9.23	07-02-2006	29.926	1.90	—	—
j9e037gnq	10.03	08-02-2006	27.151	0.208	j9e037ggq	10.04	08-02-2006	—	—	—	—
j9e038k1q	10.84	09-02-2006	26.761	0.165	j9e038juq	10.84	09-02-2006	28.112	0.30	-1.351	0.344
j9e039m9q	11.65	10-02-2006	26.976	0.208	j9e039m2q	11.64	10-02-2006	28.159	0.36	-1.183	0.416
j9e040q6q	12.50	10-02-2006	26.954	0.191	j9e040pzq	12.50	10-02-2006	28.809	0.61	-1.855	0.634
j9e041rwq	13.30	11-02-2006	27.035	0.200	—	—	—	—	—	—	—
j9e042u8q	14.12	12-02-2006	26.666	0.166	j9e042u1q	14.16	12-02-2006	29.453	1.25	-2.787	1.256
j9e043dmq	14.97	13-02-2006	26.456	0.128	j9e043dfq	14.97	13-02-2006	28.481	0.44	-2.025	0.460
j9e044h0q	15.77	14-02-2006	26.648	0.142	j9e044gtq	15.77	14-02-2006	—	—	—	—

Table 2 continued on next page

Table 2 (*continued*)

HST File	Days from Max days	Obs Date DD-MM-YYYY	V mag	V_{err} mag	HST File	Days from Max days	Obs Date DD-MM-YYYY	I mag	I_{err} mag	$(V - I)$ mag	$(V - I)_{err}$ mag
j9e045j6q	16.58	15-02-2006	—	—	—	—	—	—	—	—	—
j9e046moq	17.38	15-02-2006	—	—	—	—	—	—	—	—	—
j9e047onq	18.18	16-02-2006	26.740	0.166	j9e047ogq	18.18	16-02-2006	28.405	0.45	-1.665	0.482
j9e068qxq	18.98	17-02-2006	—	—	—	—	—	—	—	—	—
j9e073tfq	19.78	18-02-2006	26.443	0.123	j9e073t8q	19.78	18-02-2006	27.899	0.28	-1.456	0.303
j9e076v4q	20.72	19-02-2006	26.631	0.171	j9e076uxq	20.75	19-02-2006	—	—	—	—
j9e086aoq	21.71	20-02-2006	26.659	0.169	j9e086ahq	21.75	20-02-2006	27.737	0.27	-1.078	0.320
j9e092e9q	22.58	21-02-2006	—	—	j9e092e2q	22.62	20-02-2006	—	—	—	—
j9e048fzq	23.17	21-02-2006	27.101	0.224	—	—	—	—	—	—	—
j9e094giq	23.42	21-02-2006	26.521	0.130	—	—	—	—	—	—	—
j9e049wmq	28.24	26-02-2006	—	—	j9e049wfq	28.28	26-02-2006	29.597	1.84	—	—
j9e0a1bhq	29.08	27-02-2006	26.626	0.151	j9e0a6fzq	29.08	01-03-2006	27.506	0.23	-0.880	0.273
j9e0a5drq	29.90	28-02-2006	—	—	—	—	—	—	—	—	—
j9e0a6g6q	30.69	01-03-2006	26.652	0.159	j9e0b8jvq	30.69	02-03-2006	—	—	—	—
j9e0b8k2q	31.71	02-03-2006	—	—	j9e0a8otq	31.74	03-03-2006	—	—	—	—
j9e0a8p0q	32.82	03-03-2006	26.622	0.155	j9e050tqq	32.81	04-03-2006	—	—	—	—
j9e050txq	34.15	04-03-2006	26.500	0.133	j9e0c4cbq	34.15	05-03-2006	—	—	—	—
j9e0c4xiq	35.02	05-03-2006	26.626	0.138	j9e0a1baq	35.01	27-02-2007	29.235	0.89	—	—

Table 3. Positions, and Rise and Decline Times of M87 Novae

Nova #	Radial Distance arcsec	RA HH:MM:SS.ss	DEC DD:MM:SS.ss	I _{max} mag	V _{max} mag	t _{1rise} days	t _{2rise} days	t _{1decline} days	t _{2decline} days
1	14.80	12:30:48.85	+12:23:16.91	21.54	21.84	1.97	4.60	8.52	15.24
2	33.32	12:30:49.85	+12:22:56.80	21.85	22.25	1.41	2.85	0.92	11.25
3	110.87	12:30:54.23	+12:22:03.05	22.71	22.64	4.86	9.72	0.94	2.01
4	4.99	12:30:49.60	+12:23:24.82	22.28	22.74	2.27	4.74	3.56	7.66
5	14.20	12:30:46.86	+12:23:47.97	22.74	22.99	1.34	2.46	7.13	17.13
6	42.23	12:30:50.38	+12:23:25.86	22.70	23.18	0.93	2.61	3.70	11.17
7	10.86	12:30:49.92	+12:23:20.93	23.61	23.21	0.90	1.80	4.75	9.33
8	18.67	12:30:48.18	+12:23:31.37	22.95	23.37	1.75	2.75	1.82	3.72
9	19.29	12:30:49.16	+12:23:46.32	24.97	23.42	...	...	...	...
10	16.76	12:30:49.68	+12:23:45.43	23.27	23.51	1.90	4.28	7.14	22.34
11	46.41	12:30:51.94	+12:23:57.37	23.03	23.57	1.22	2.21	14.80	28.92
12	92.15	12:30:50.54	+12:24:59.69	23.17	23.58	0.95	1.76	10.22	33.07
13	70.36	12:30:46.14	+12:22:37.80	23.39	23.67	0.65	1.31	3.29	6.69
14	16.43	12:30:48.48	+12:23:37.68	23.62	23.74	1.49	4.10	15.13	31.49
15	5.31	12:30:49.47	+12:23:23.77	23.31	23.75	...	...	...	...
16	57.24	12:30:53.18	+12:23:44.84	23.51	23.77	1.56	3.14	13.22	32.62
17	82.83	12:30:43.79	+12:23:34.65	23.64	23.81	2.16	4.41	13.81	30.41
18	60.02	12:30:47.73	+12:24:23.67	23.28	23.83	5.19	9.09	1.88	3.75
19	5.21	12:30:49.07	+12:23:28.82	23.65	23.90	1.31	2.42	4.00	8.96
20	28.80	12:30:51.38	+12:23:33.04	23.51	23.94	4.90	9.80	15.90	36.29
21	45.54	12:30:47.56	+12:22:52.73	23.75	24.07	2.36	6.03	8.59	29.89
22	47.61	12:30:46.23	+12:23:21.99	23.69	24.14	3.51	7.87	4.16	8.33
23	40.90	12:30:47.89	+12:22:54.95	23.95	24.16	3.83	12.13	2.52	7.96
24	17.73	12:30:49.48	+12:23:09.76	24.65	24.19	...	...	...	...
25	54.75	12:30:47.09	+12:24:11.68	24.06	24.27	...	...	...	...
26	92.21	12:30:47.76	+12:22:00.15	25.83	24.38	...	...	...	...
27	94.97	12:30:44.25	+12:24:26.28	25.00	24.82	...	...	...	...
28	53.29	12:30:49.73	+12:24:22.06	24.93	24.93	...	...	...	...
29	133.03	12:30:54.53	+12:21:38.70	25.66	25.18	...	...	...	...
30	97.94	12:30:49.62	+12:25:06.81	24.75	25.19	...	...	...	...
31	49.63	12:30:46.79	+12:22:58.00	25.01	25.32	...	...	...	...
32	65.05	12:30:46.93	+12:22:35.26	25.31	25.32	...	...	...	...
33	67.11	12:30:45.04	+12:23:10.08	25.22	25.01	...	...	...	...
34	62.36	12:30:45.31	+12:23:44.69	25.67	25.86	...	...	...	...
35	61.60	12:30:53.18	+12:23:01.07	25.29	25.88	...	...	...	...
36	79.03	12:30:44.36	+12:23:02.03	25.17	25.91	...	...	...	...
37	59.42	12:30:53.46	+12:23:36.23	25.70	25.95	...	...	...	...
38	98.89	12:30:45.47	+12:24:49.12	25.30	26.01	...	...	...	...
39	69.08	12:30:44.94	+12:23:55.18	25.79	26.13	...	...	...	...
40	52.08	12:30:45.90	+12:23:34.29	25.81	26.20	...	...	...	...
41	64.52	12:30:46.68	+12:22:38.69	25.01	26.30	...	...	...	...

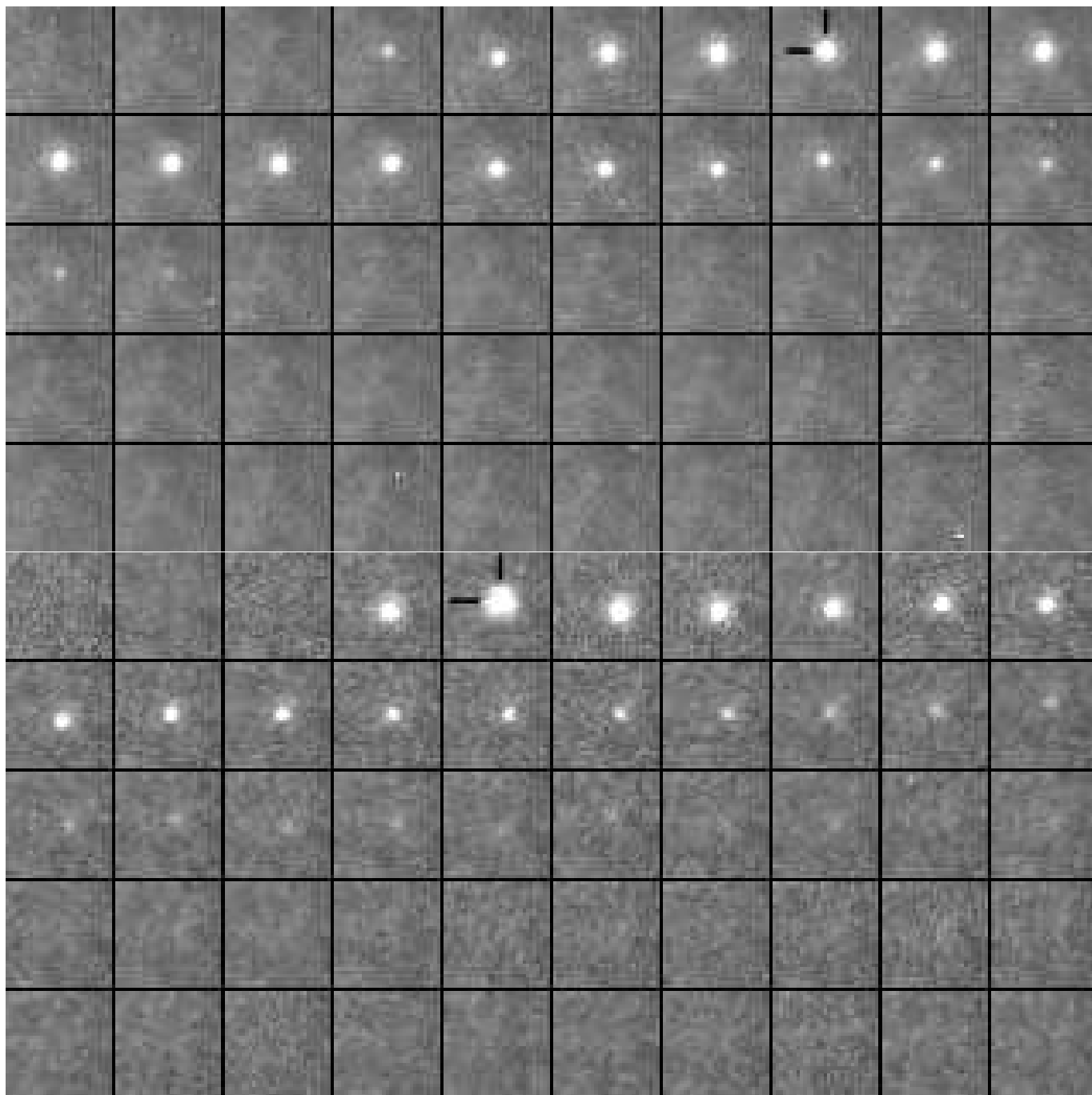


Figure 2a. Daily *I* band images of M87 Nova 1 (top) and M87 Nova 2 (bottom). Novae are ordered by peak brightness in the *V* band; a vertical and horizontal tic indicate the day of peak brightness. All “postage stamps” are 1.5 x 1.5 arc sec in size.

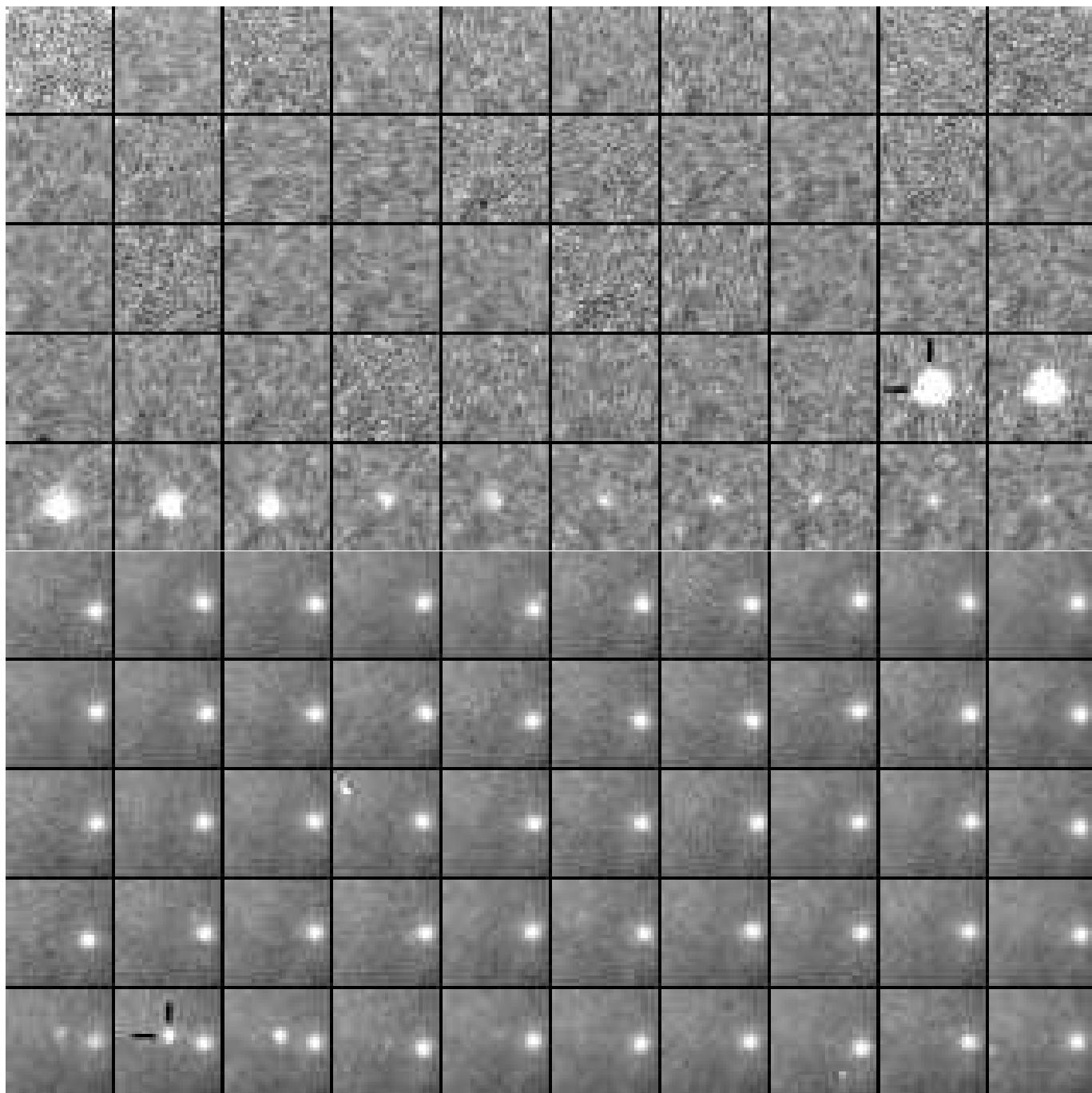


Figure 2b. Same as Figure 1a but for M87 Nova 3 (top) and M87 Nova 4 (bottom).

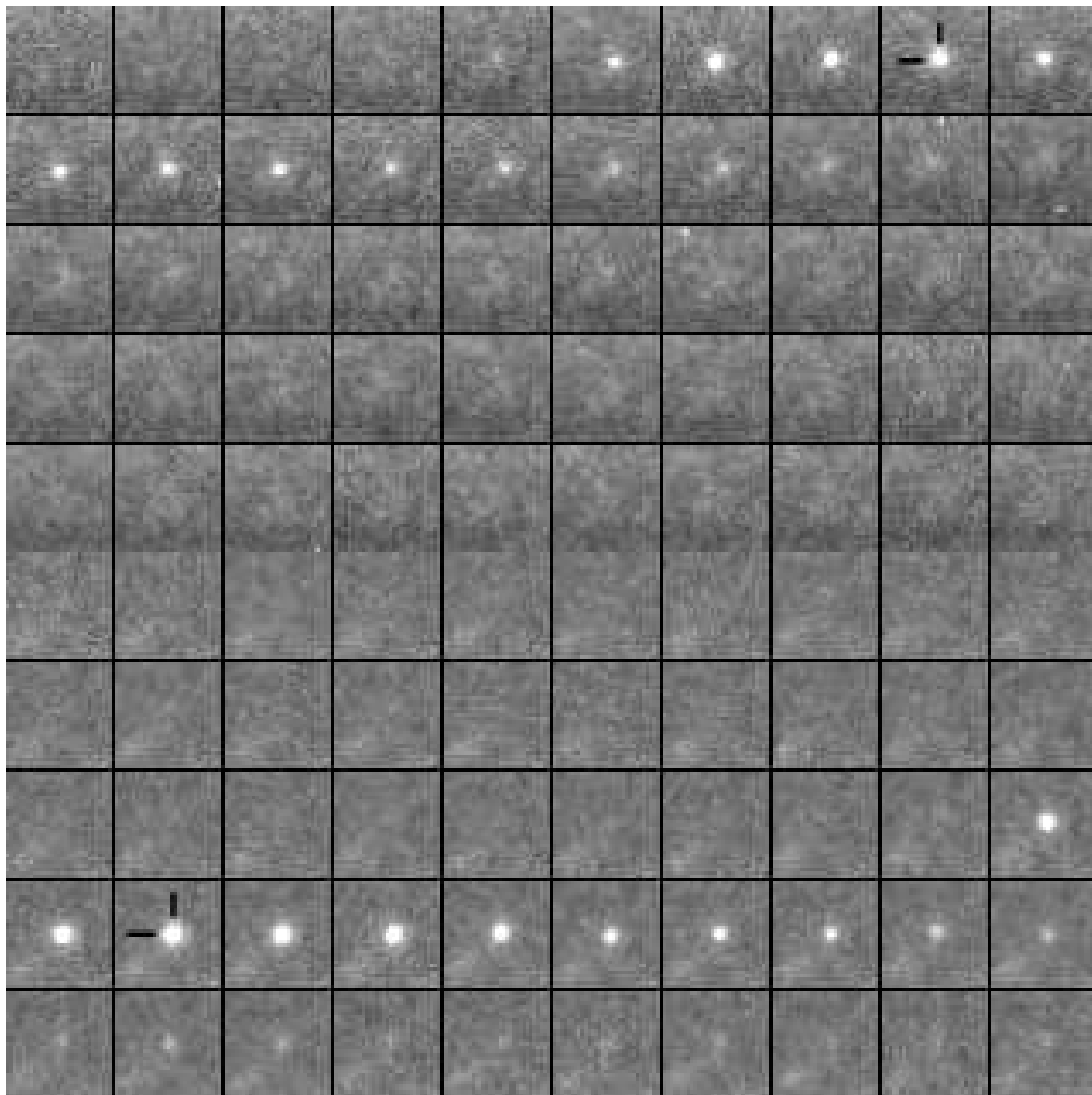


Figure 2c. Same as Figure 1a but for M87 Nova 5 (top) and M87 Nova 6 (bottom).

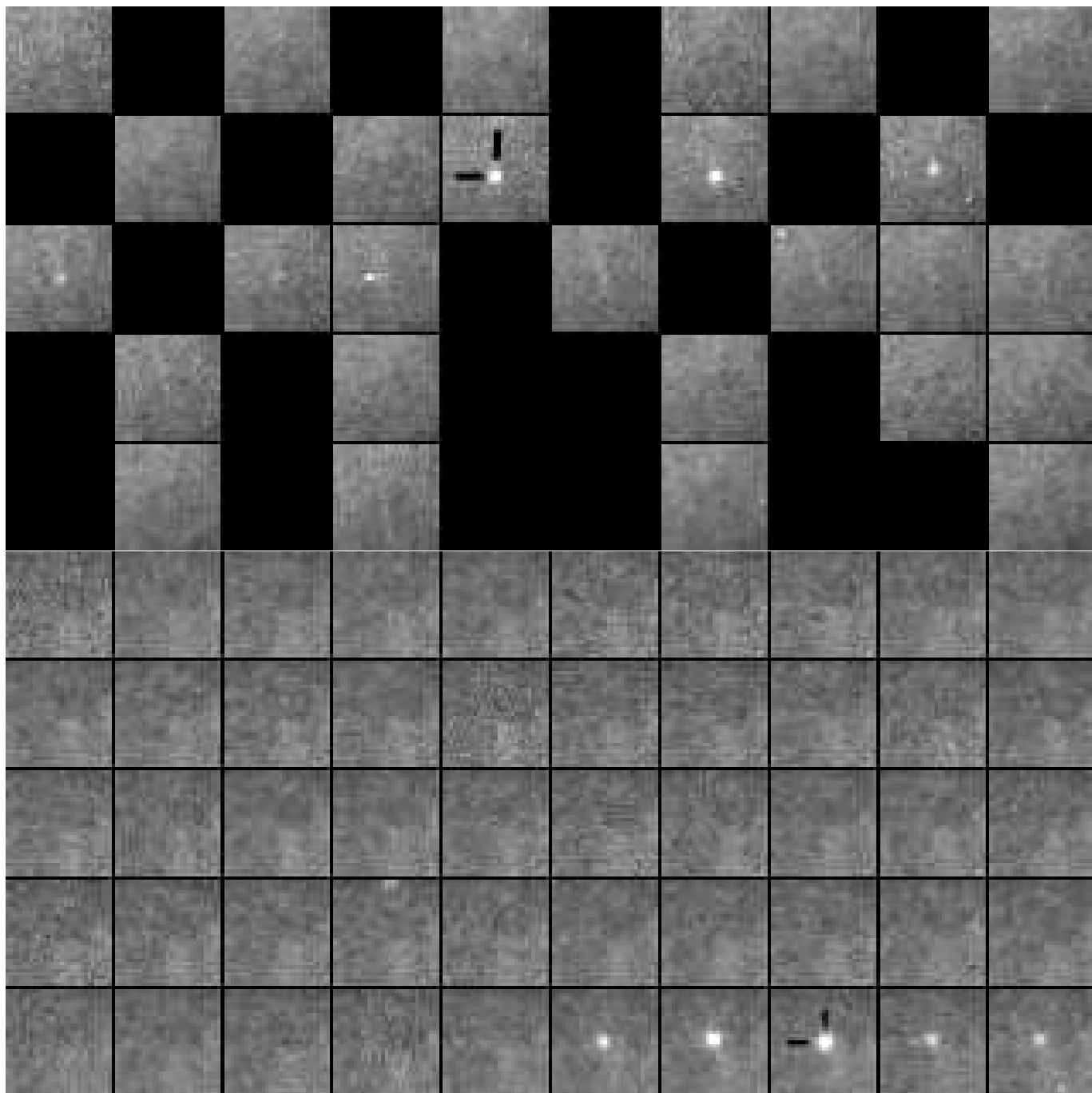


Figure 2d. Same as Figure 1a but for M87 Nova 7 (top) and M87 Nova 8 (bottom).

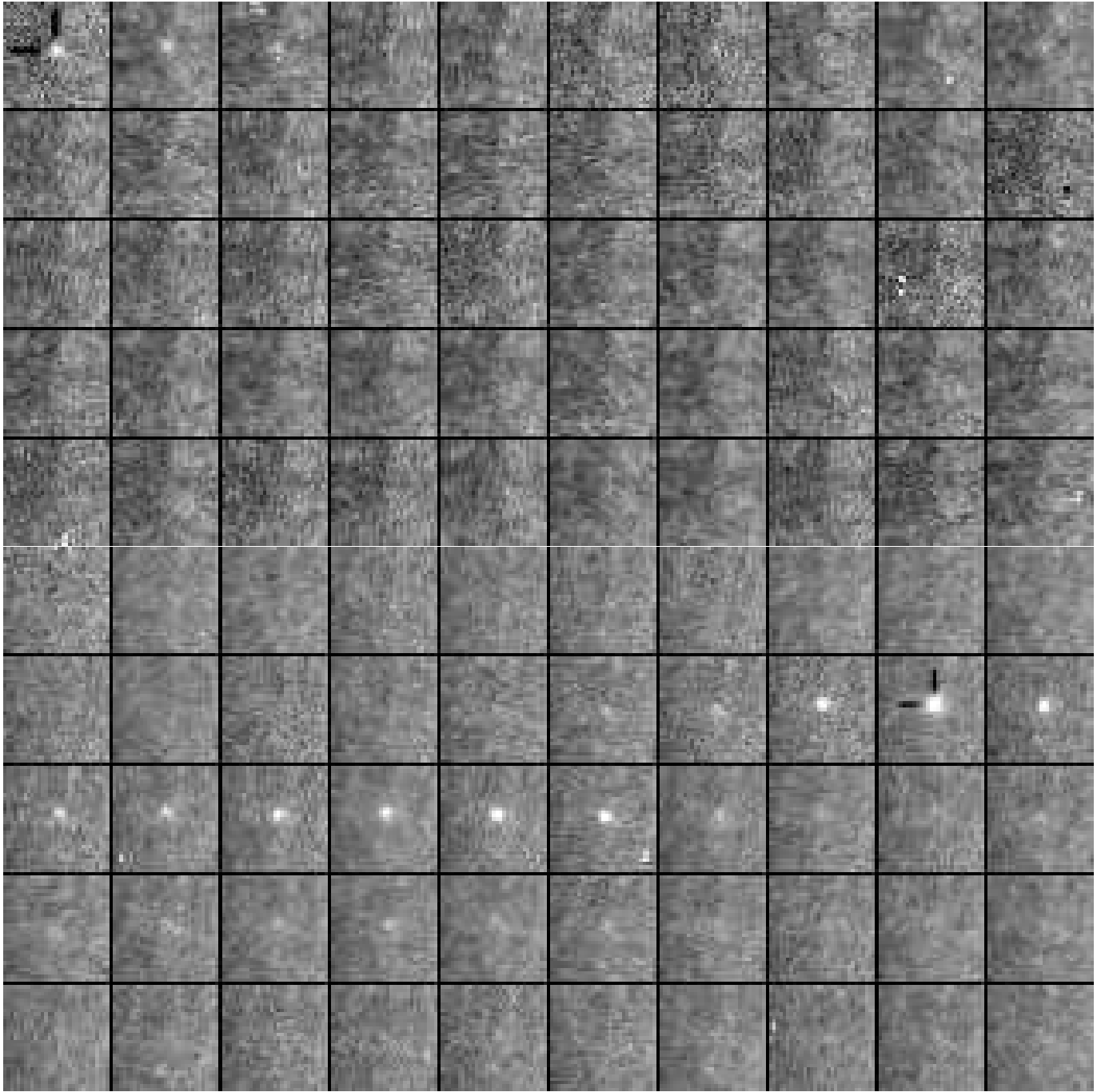


Figure 2e. Same as Figure 1a but for M87 Nova 9 (top) and M87 Nova 10 (bottom).

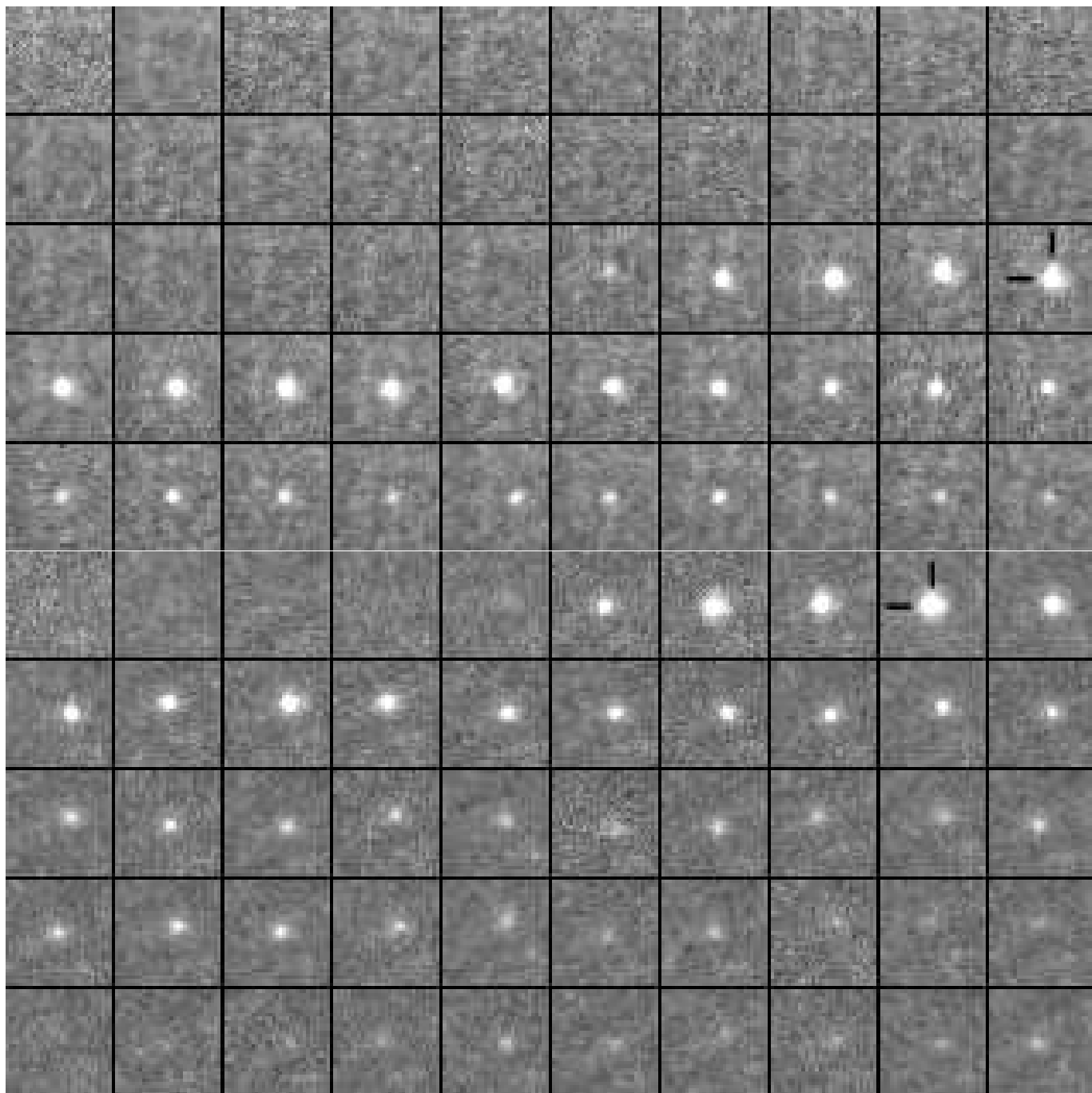


Figure 2f. Same as Figure 1a but for M87 Nova 11 (top) and M87 Nova 12 (bottom).

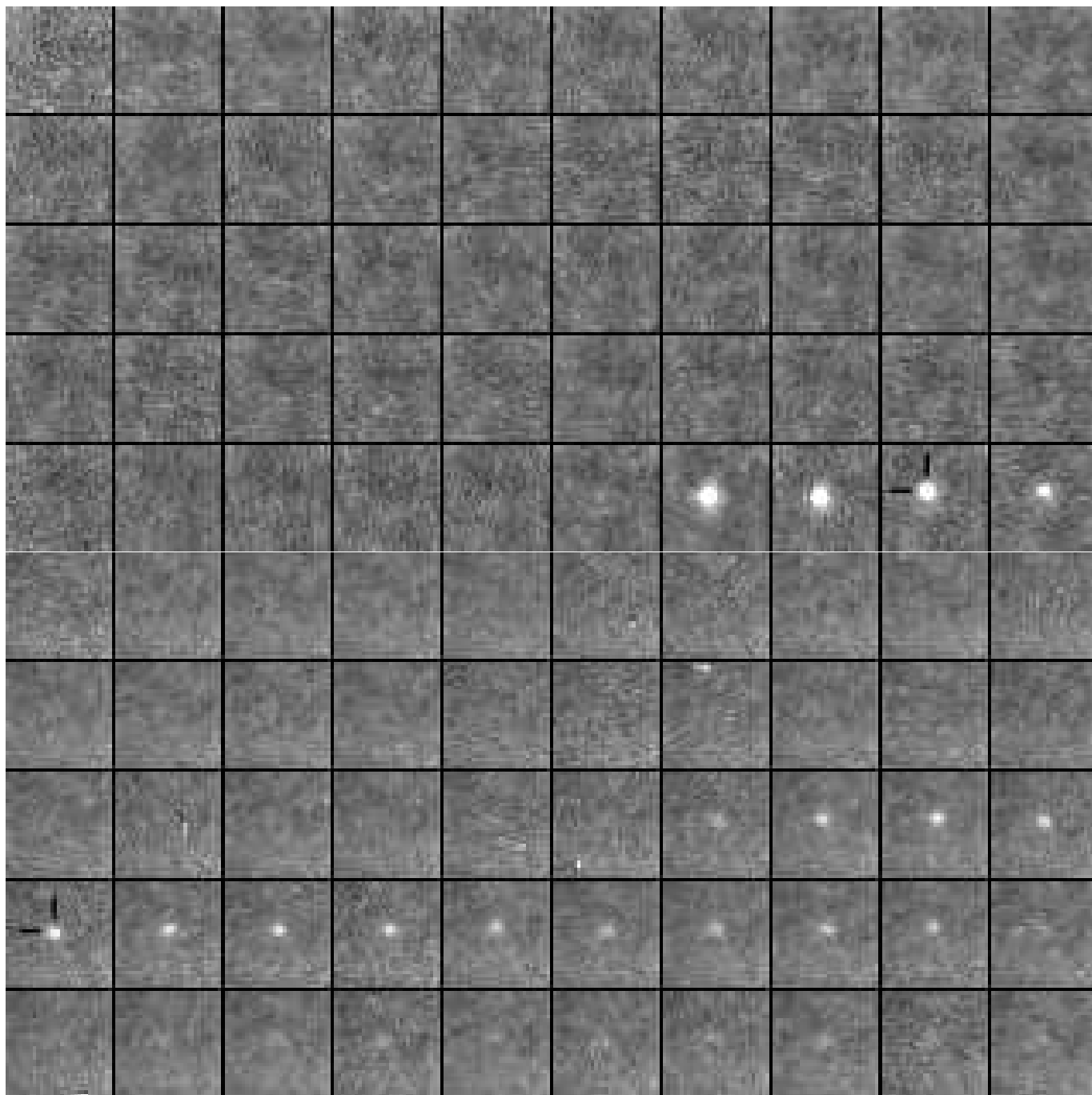


Figure 2g. Same as Figure 1a but for M87 Nova 13 (top) and M87 Nova 14 (bottom).

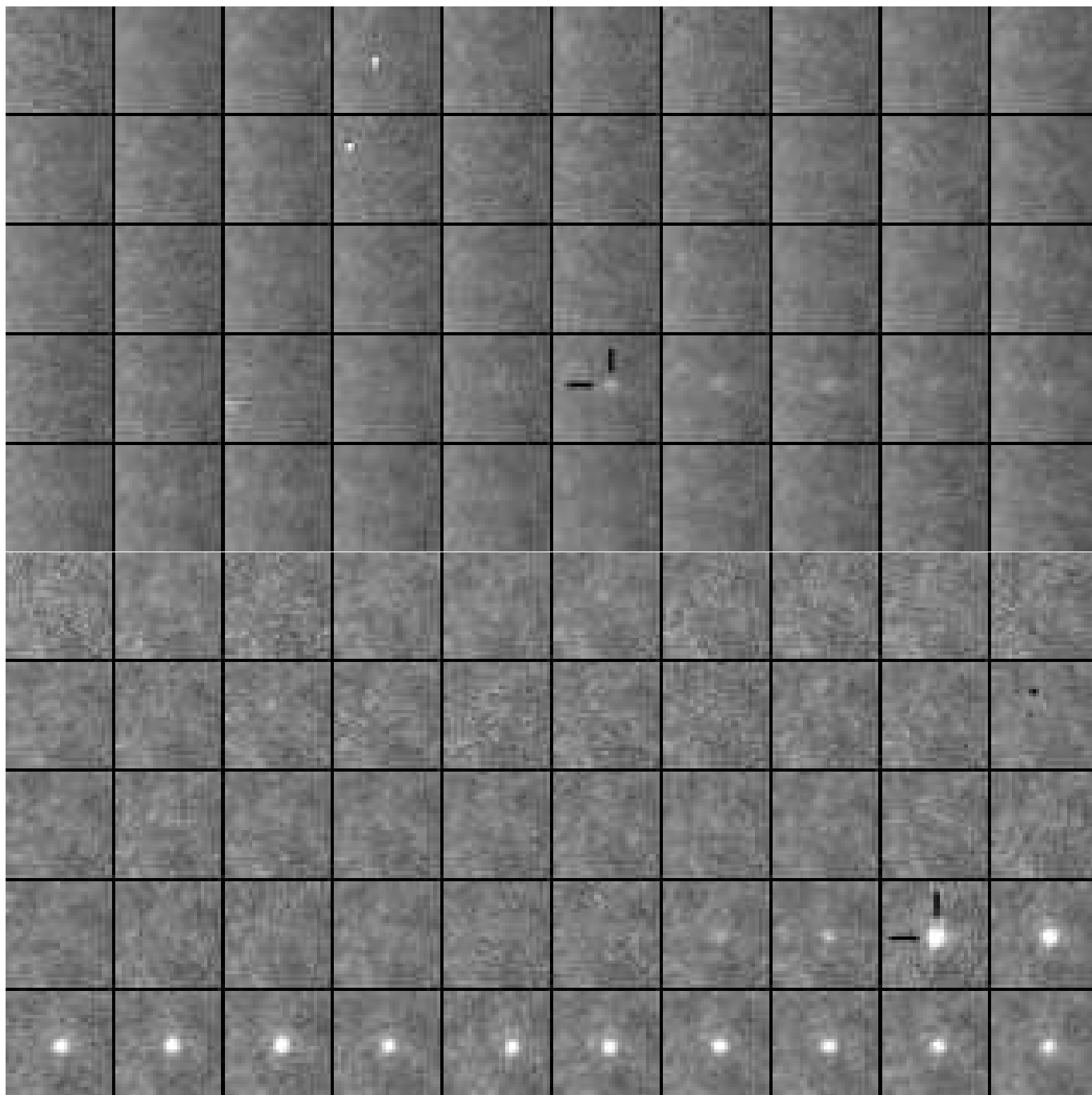


Figure 2h. Same as Figure 1a but for M87 Nova 15 (top) and M87 Nova 16 (bottom).

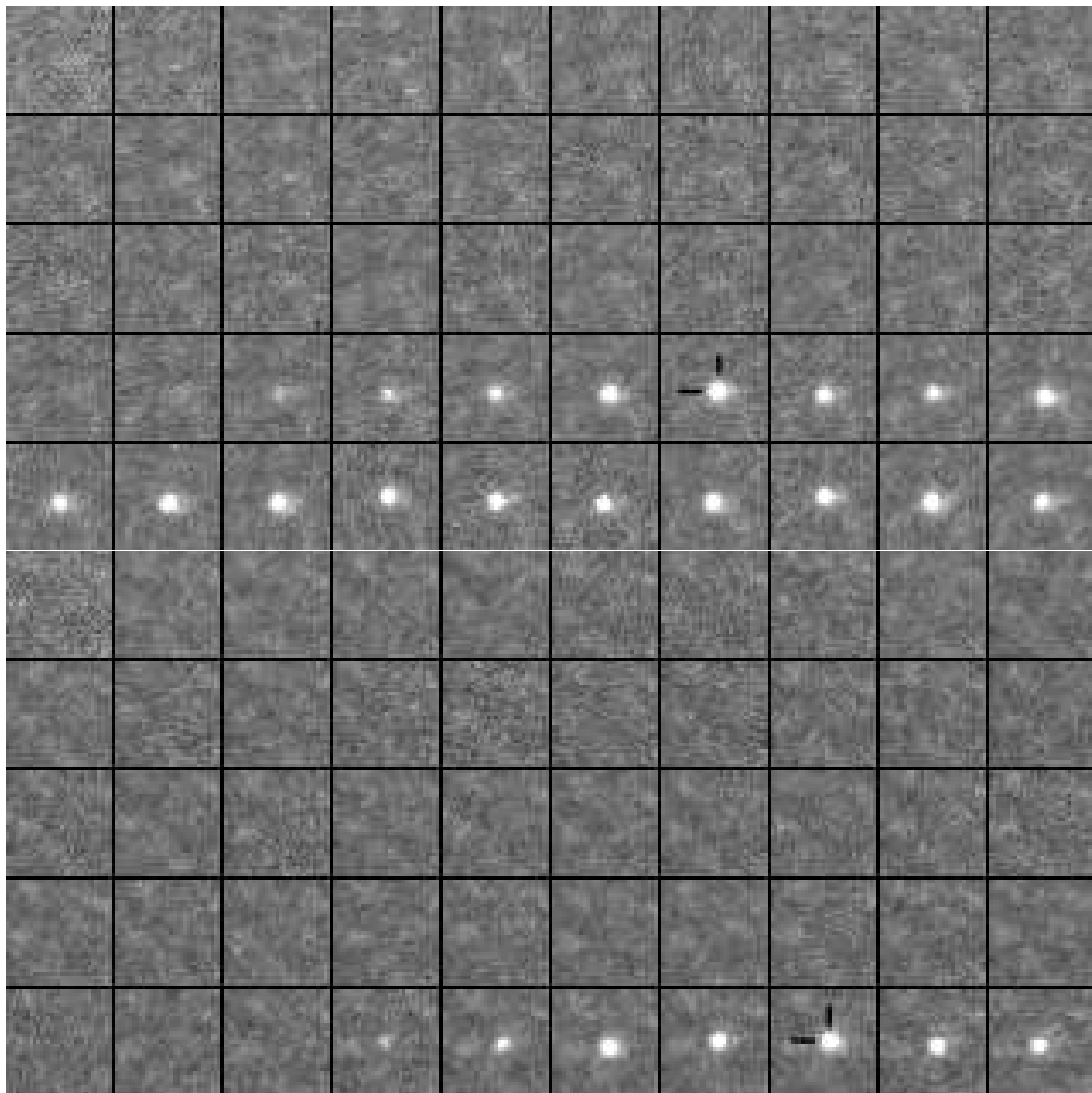


Figure 2i. Same as Figure 1a but for M87 Nova 17 (top) and M87 Nova 18 (bottom).

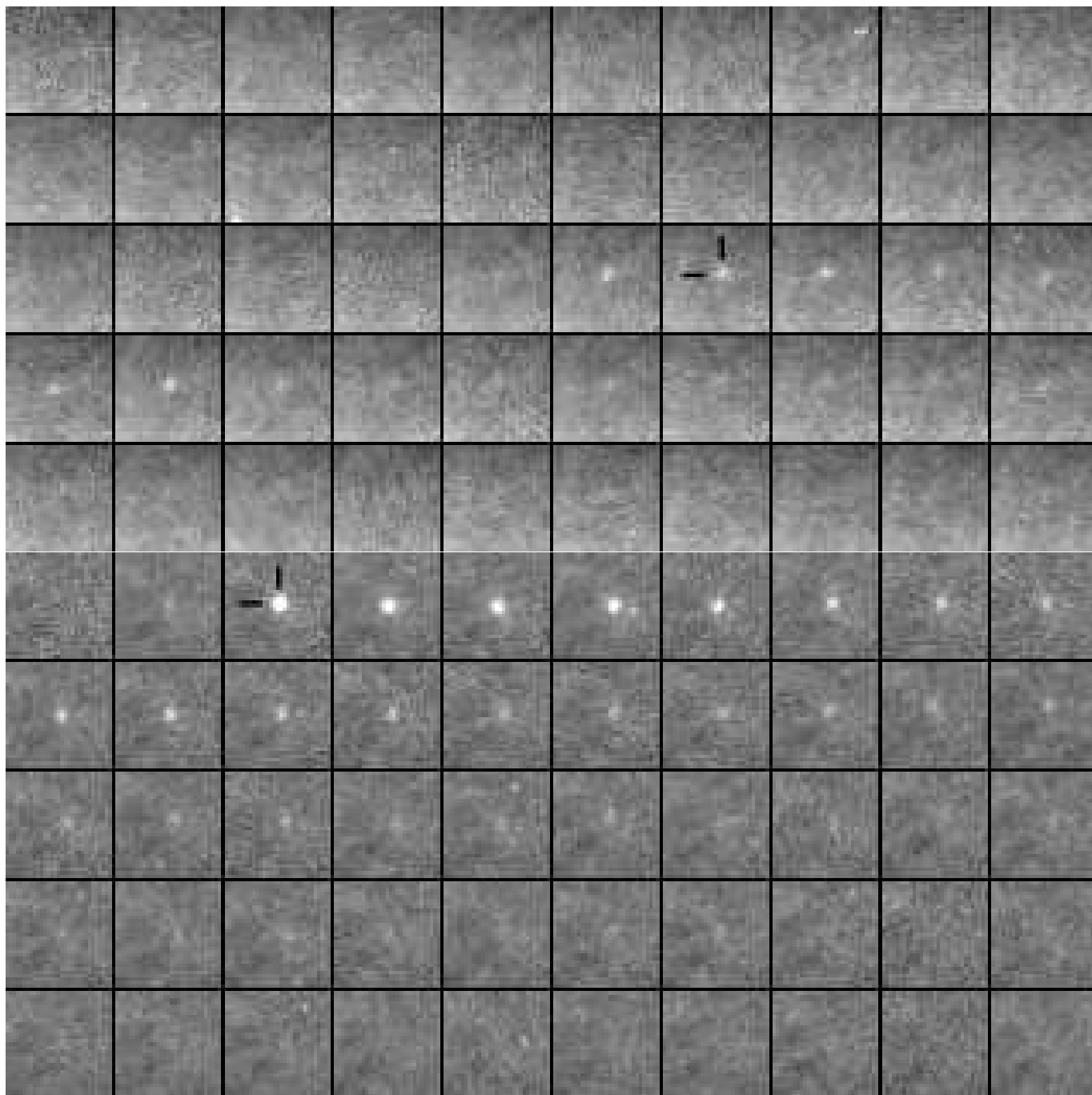


Figure 2j. Same as Figure 1a but for M87 Nova 19 (top) and M87 Nova 20 (bottom).

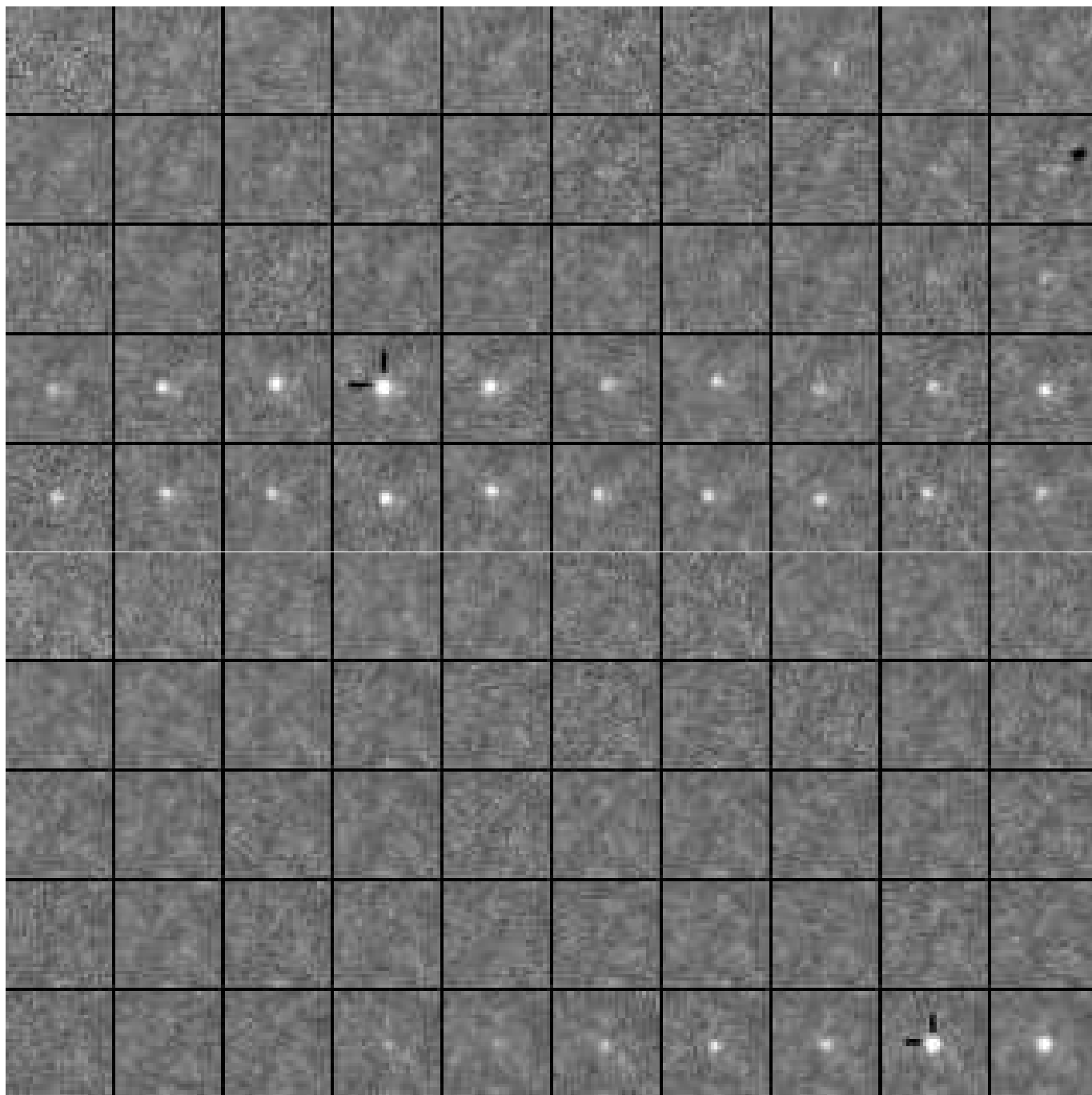


Figure 2k. Same as Figure 1a but for M87 Nova 21 (top) and M87 Nova 22 (bottom).

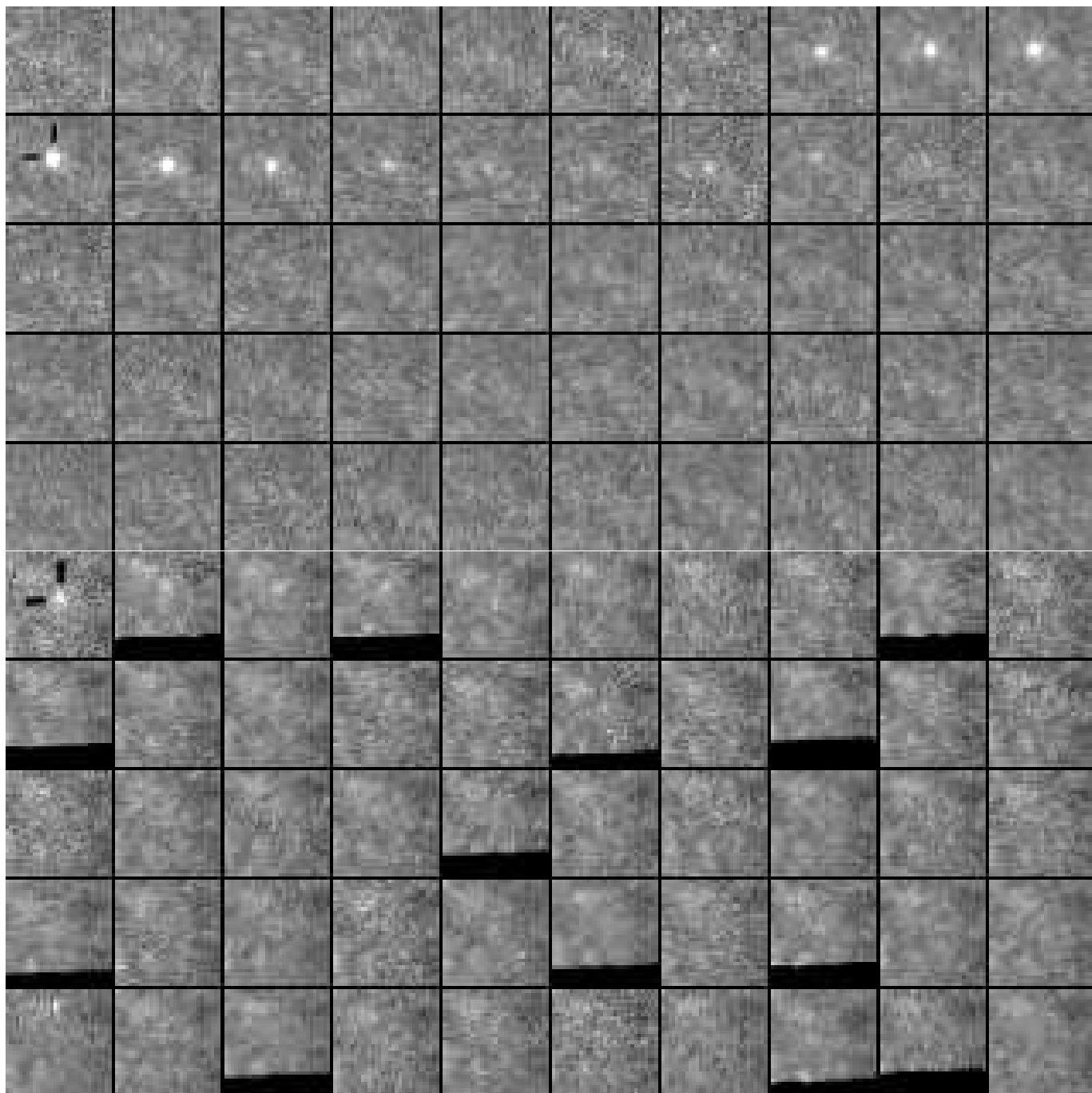


Figure 21. Same as Figure 1a but for M87 Nova 23 (top) and M87 Nova 24 (bottom).

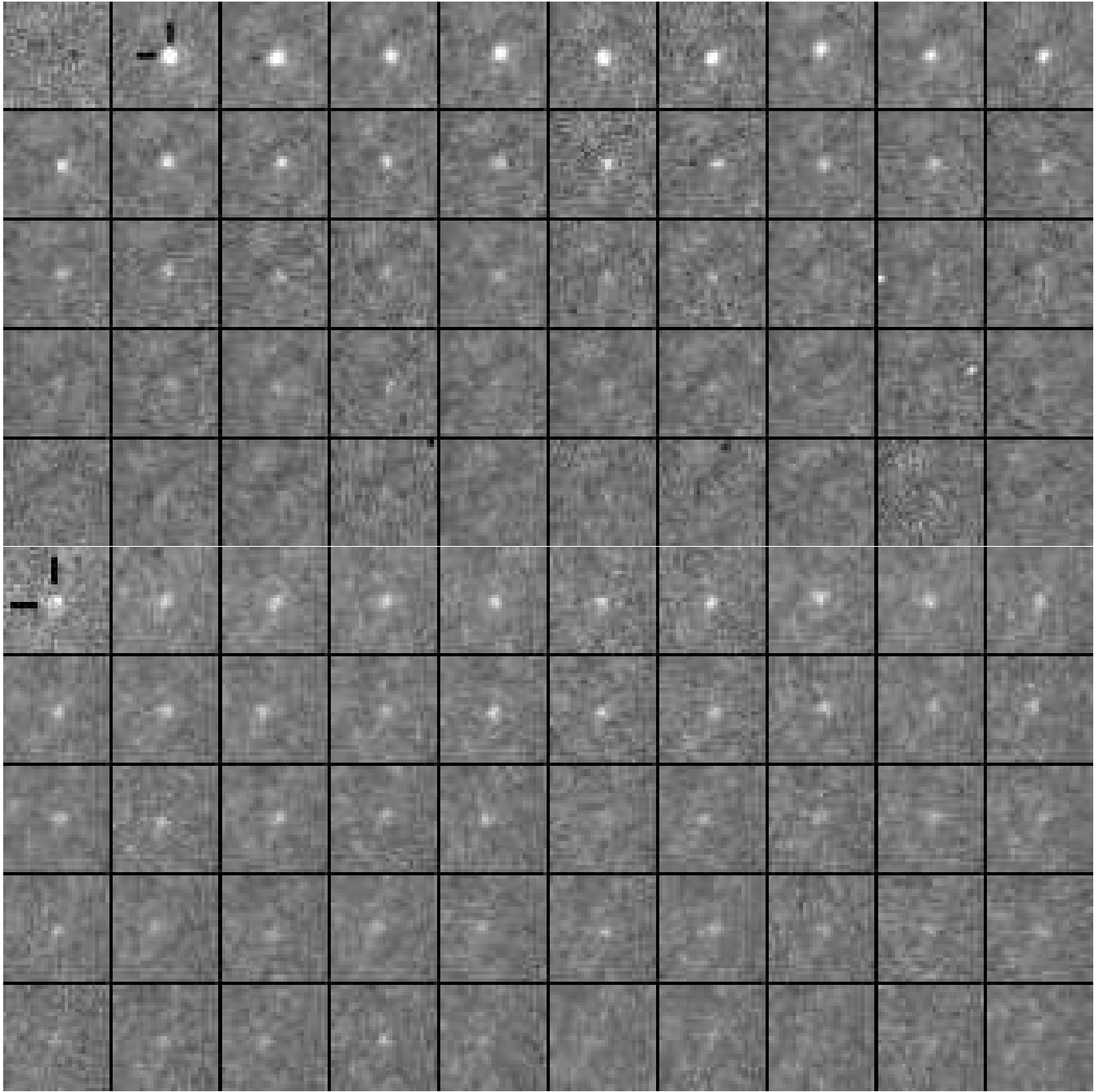


Figure 2m. Same as Figure 1a but for M87 Nova 25 (top) and M87 Nova 26 (bottom).

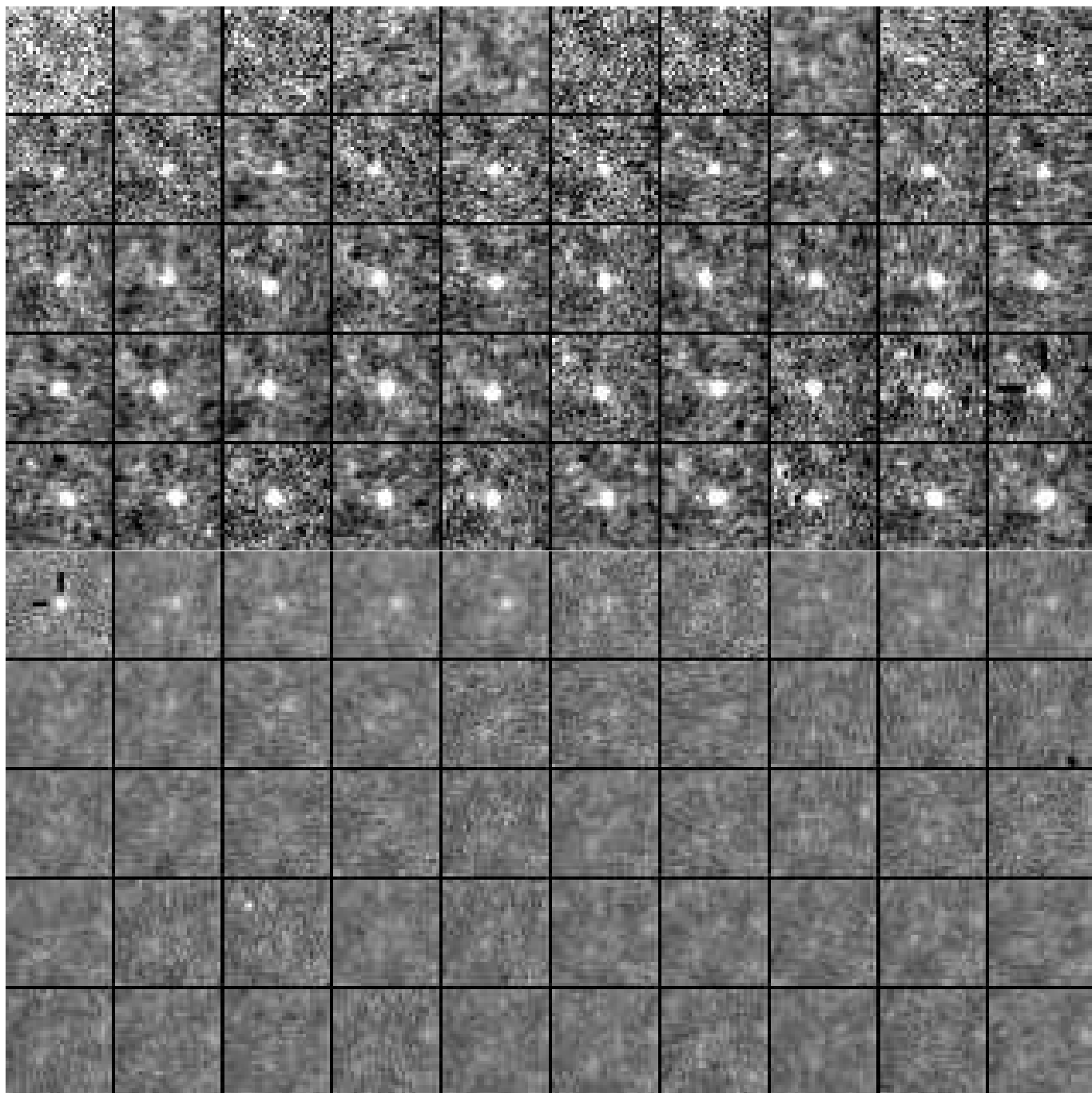


Figure 2n. Same as Figure 1a but for M87 Nova 27 (top) and M87 Nova 28 (bottom).

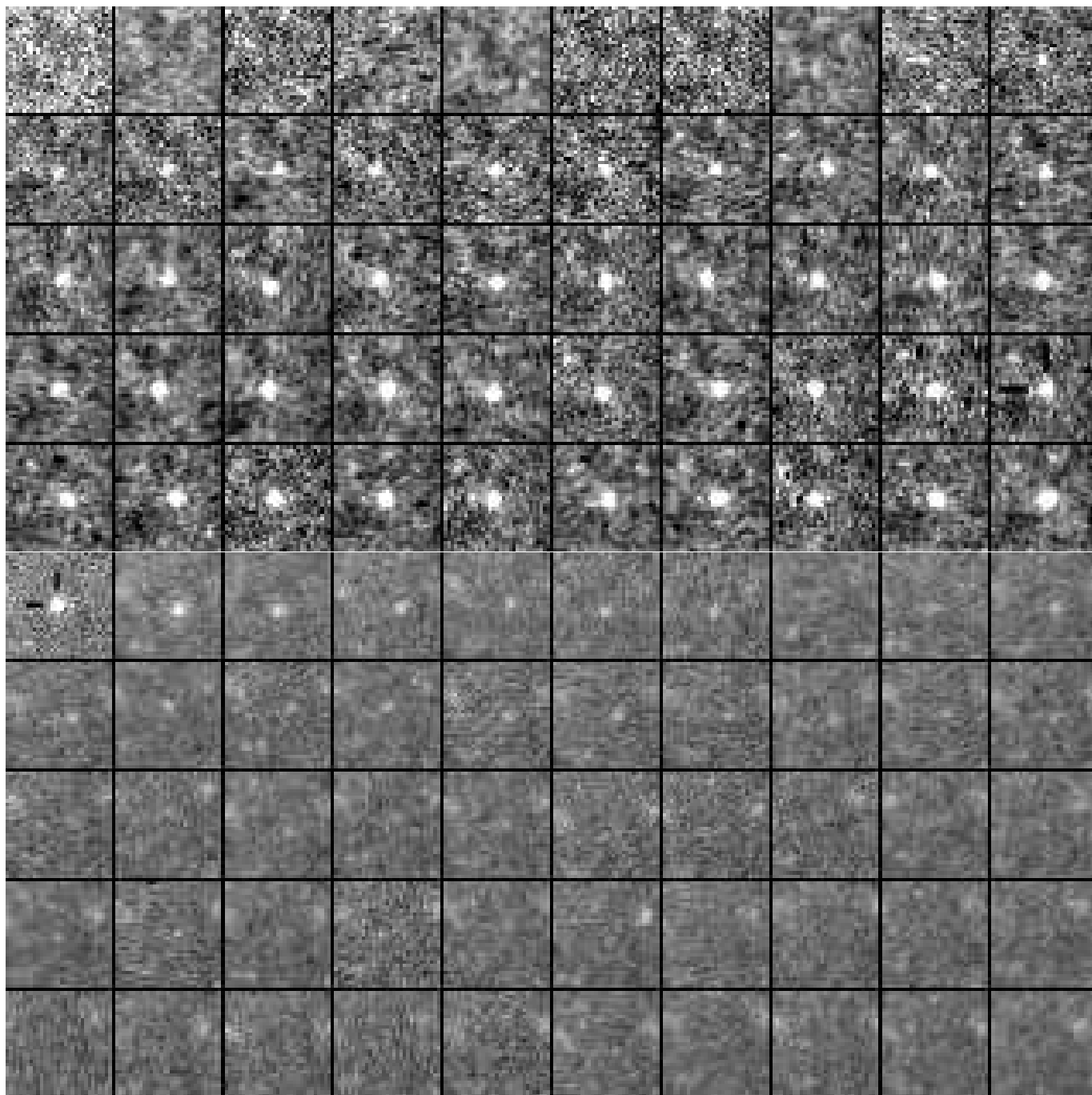


Figure 2o. Same as Figure 1a but for M87 Nova 29 (top) and M87 Nova 30 (bottom).

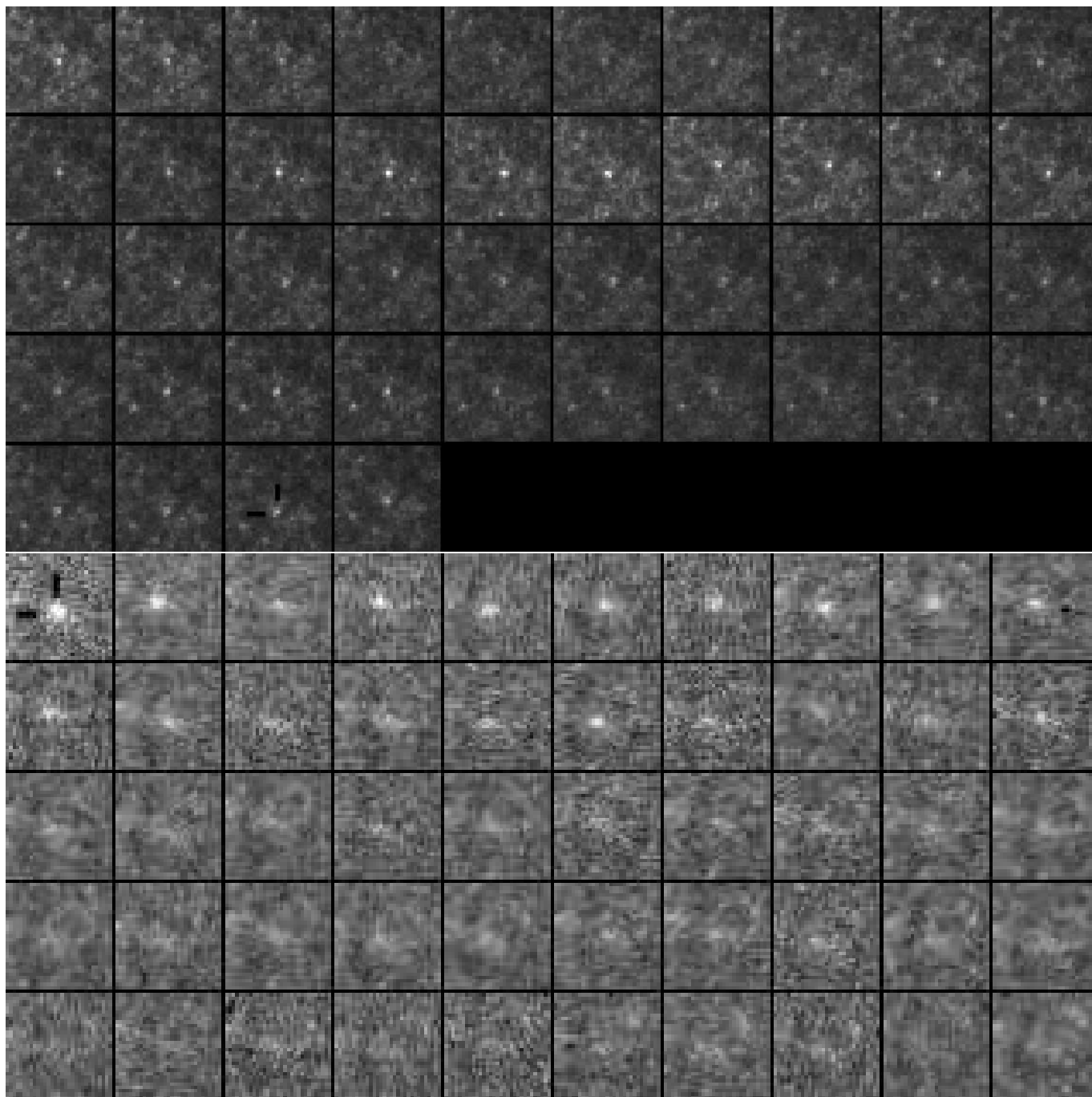


Figure 2p. Same as Figure 1a but for M87 Nova 31 (top) and M87 Nova 32 (bottom).

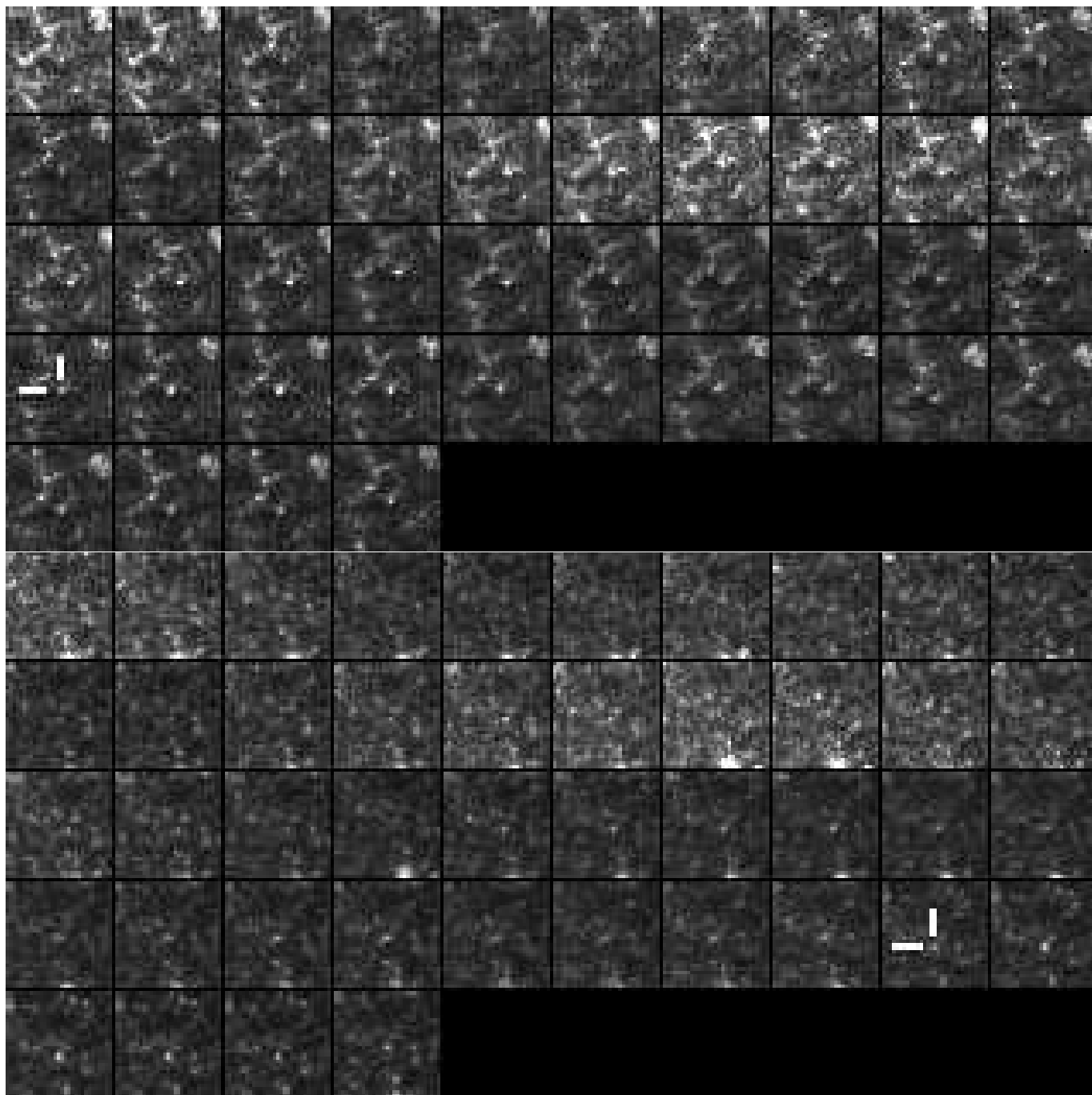


Figure 2q. Same as Figure 1a but for M87 Nova 33 (top) and M87 Nova 34 (bottom).

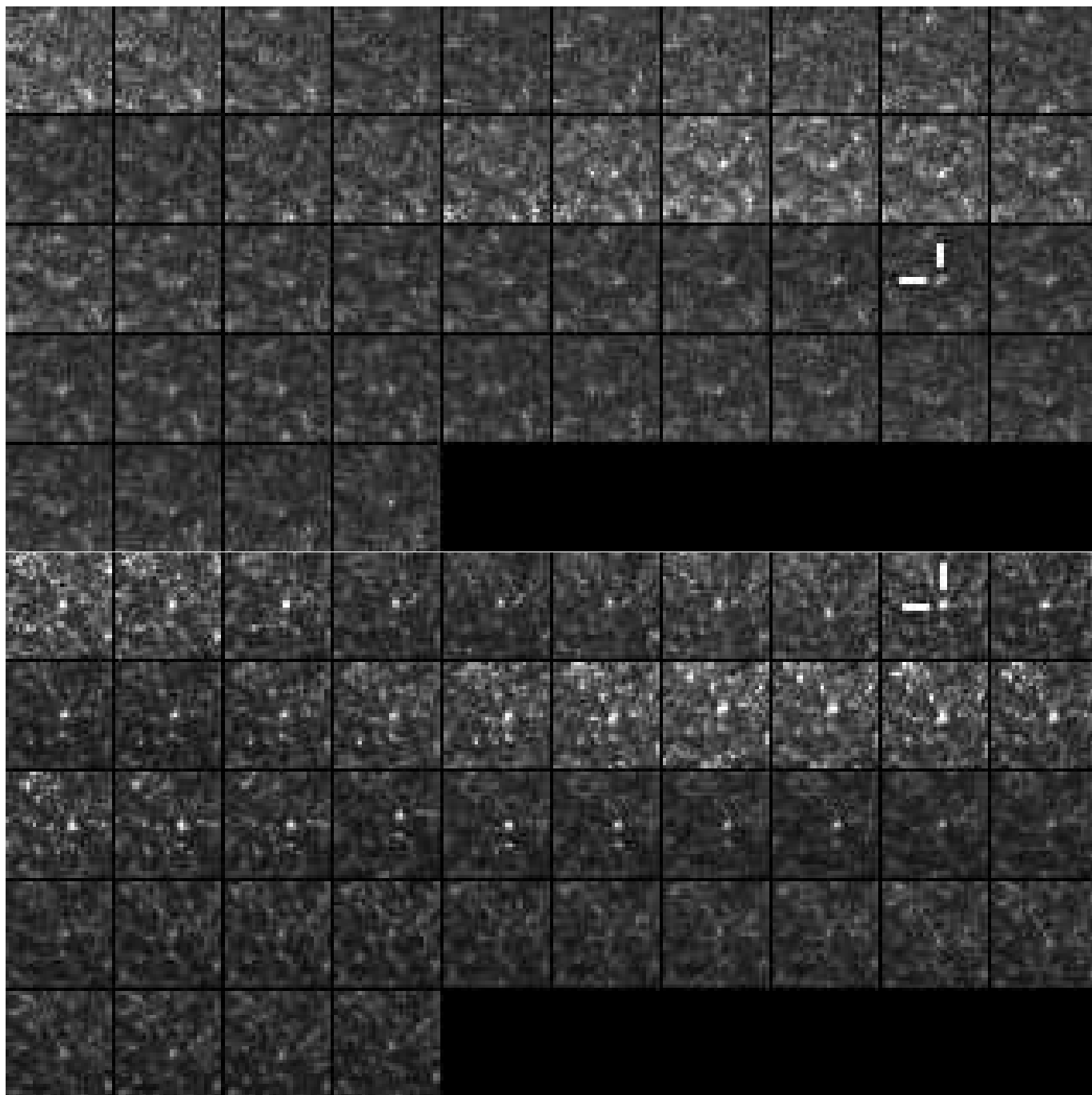


Figure 2r. Same as Figure 1a but for M87 Nova 35 (top) and M87 Nova 36 (bottom).

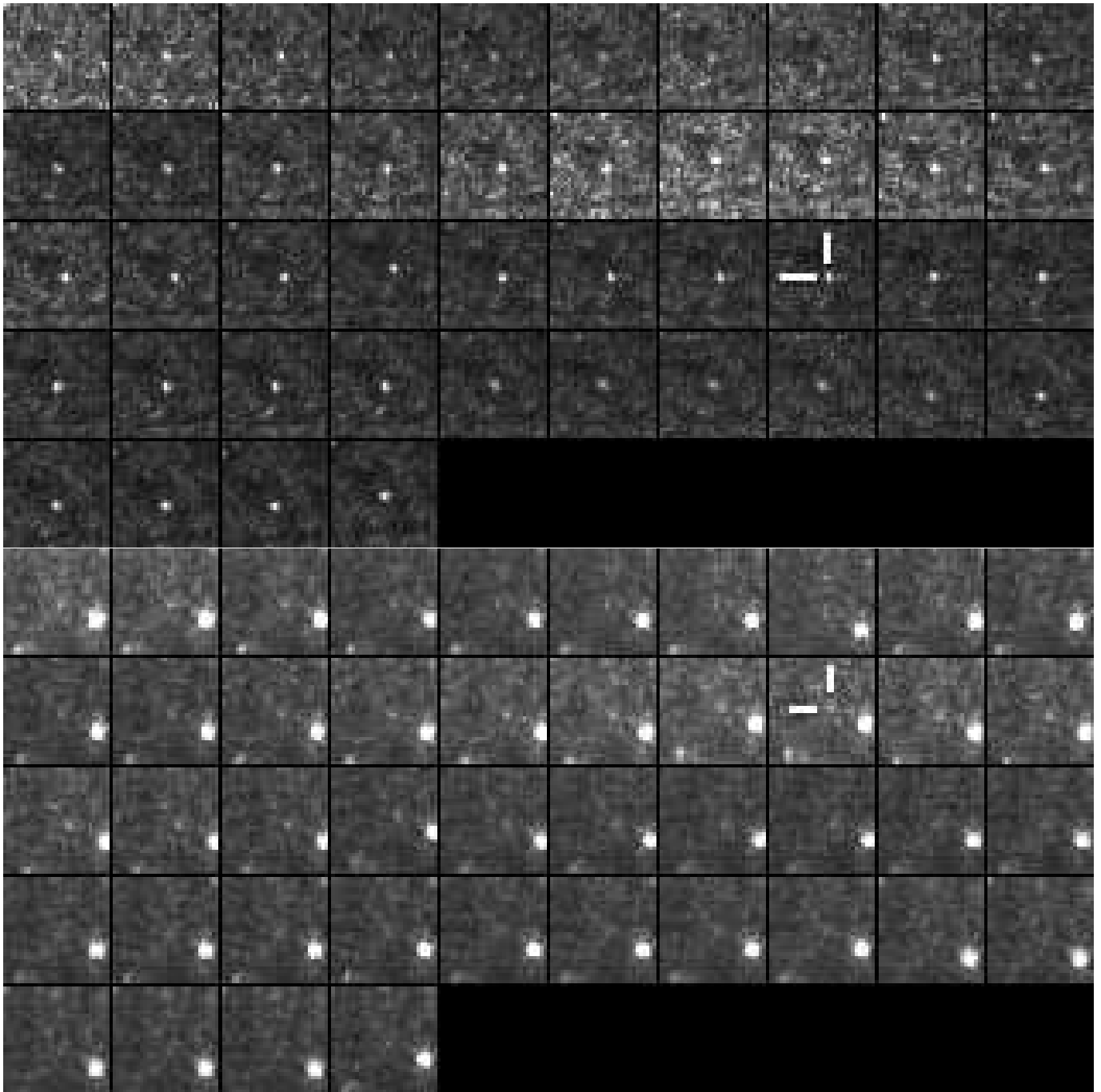


Figure 2s. Same as Figure 1a but for M87 Nova 37 (top) and M87 Nova 38 (bottom).

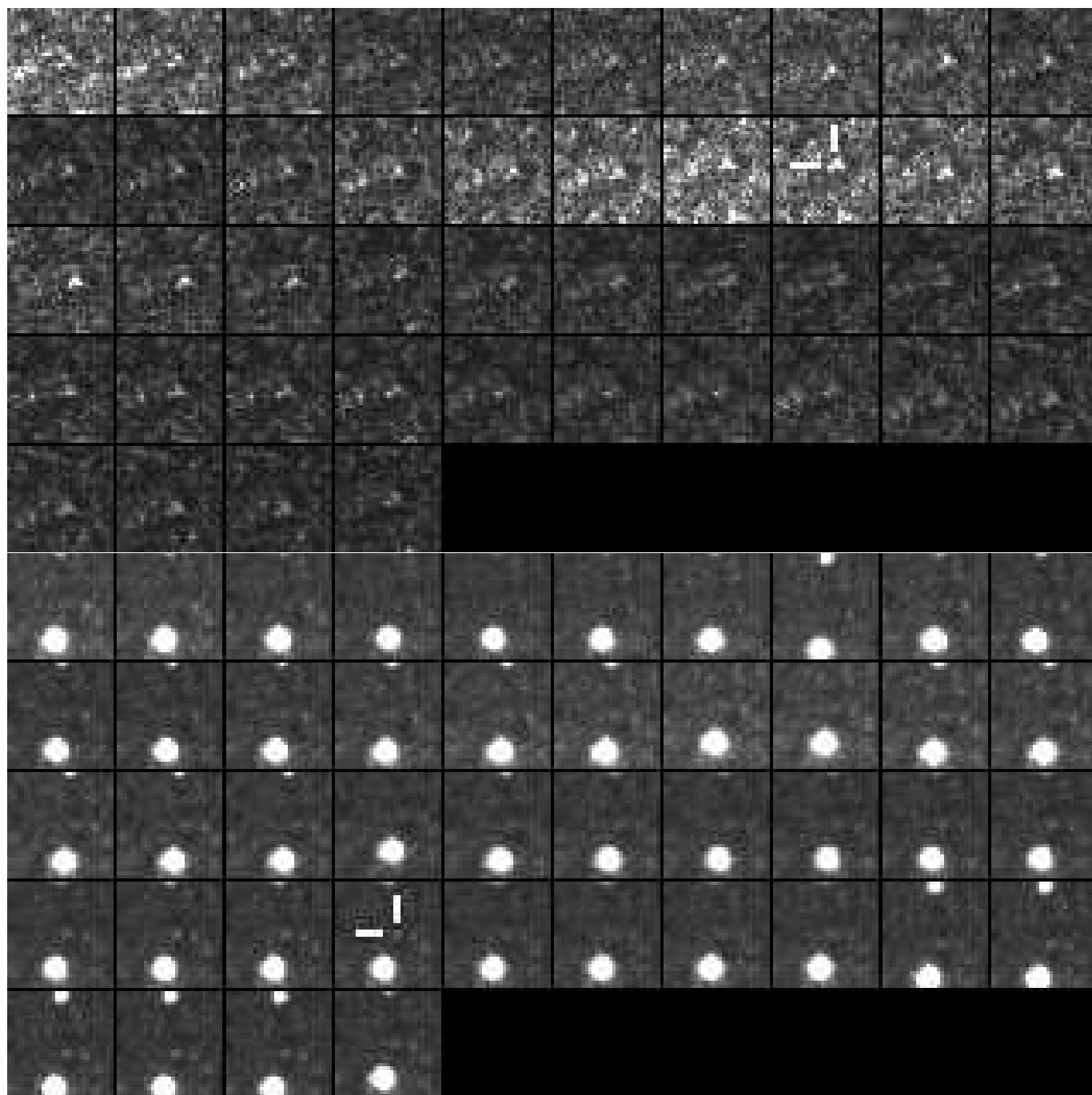


Figure 2t. Same as Figure 1a but for M87 Nova 39 (top) and M87 Nova 40 (bottom).

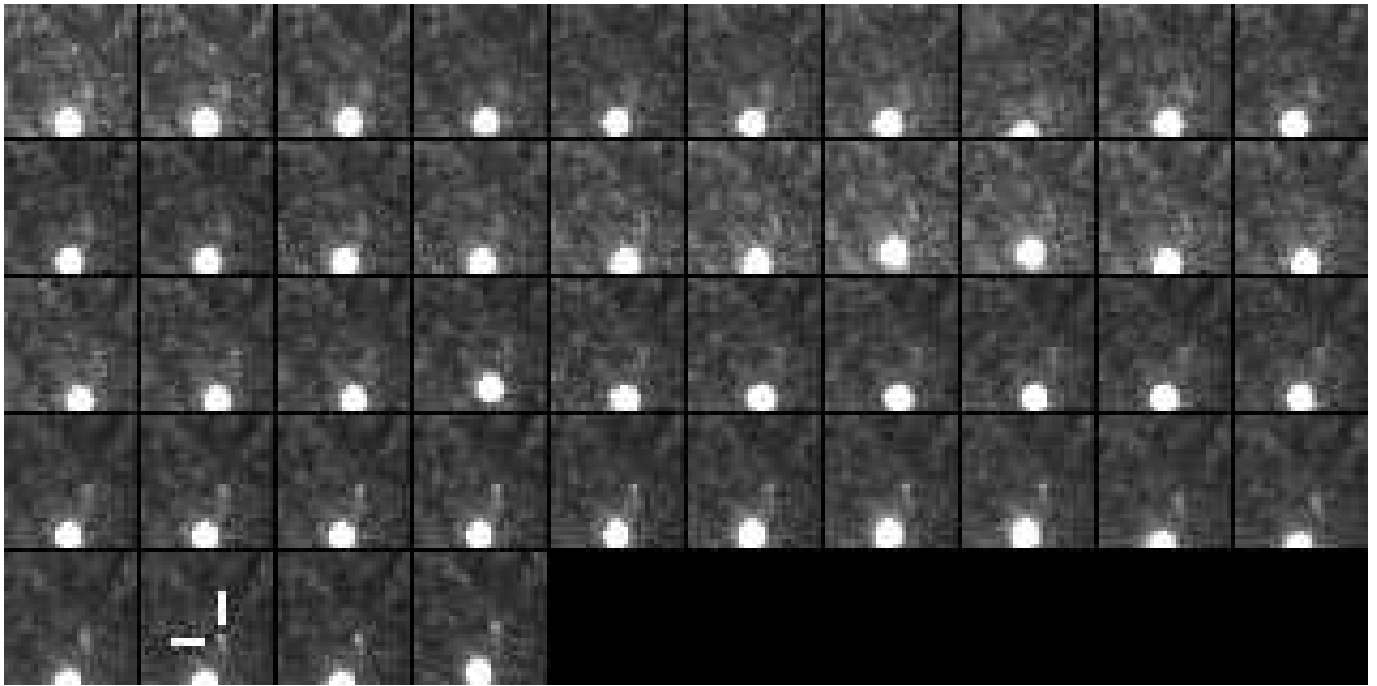


Figure 2u. Same as Figure 1a but for M87 Nova 41.

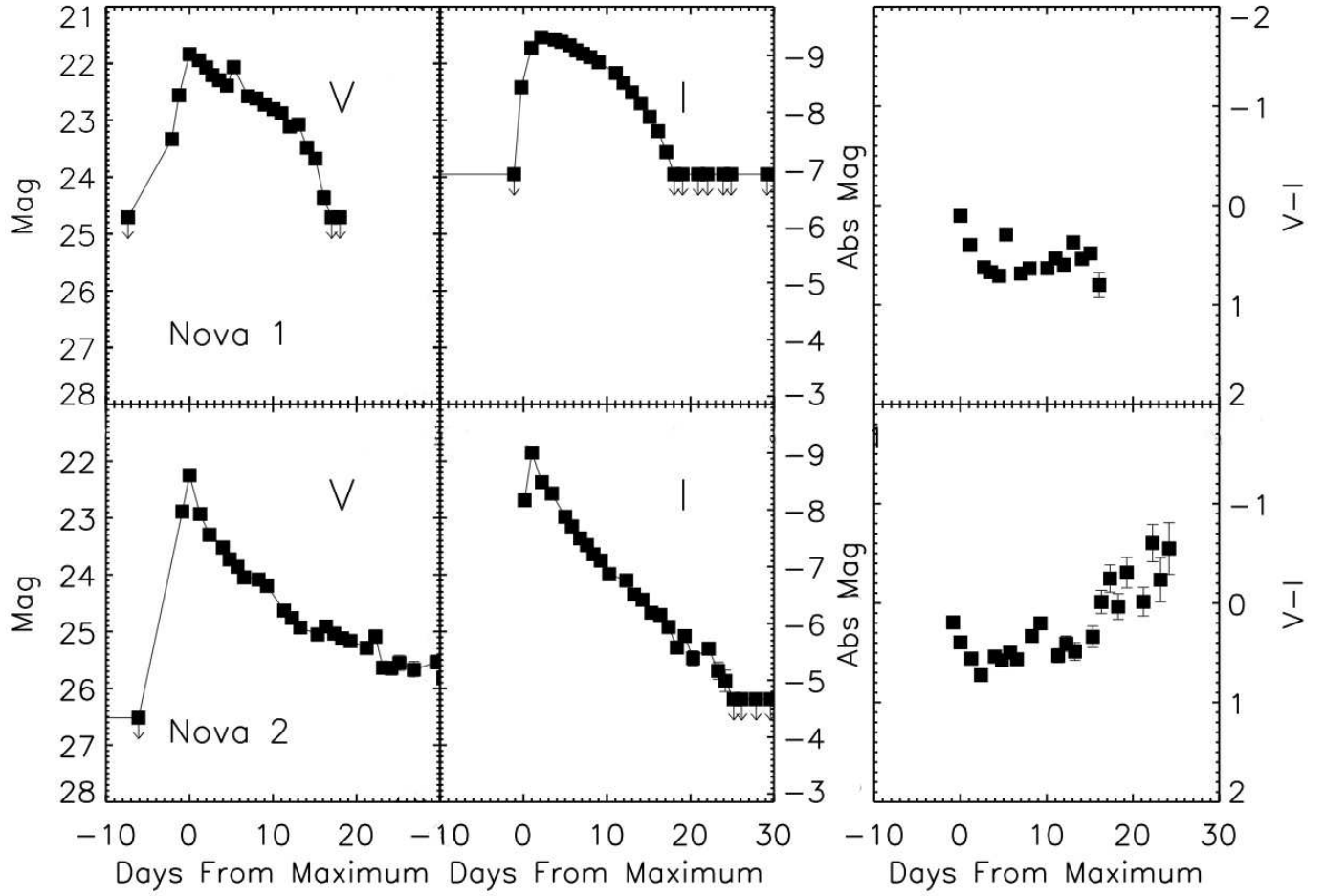


Figure 3a. Light curves of nova 1 and nova 2 in V (left), I (middle), and $V-I$ (right). As in Figure 1, novae are again ordered by peak brightness in the V band. Upper limits are indicated by square data points with downward pointing arrows. Error bars are displayed for all measurements except for those smaller than the solid squares representing data points.

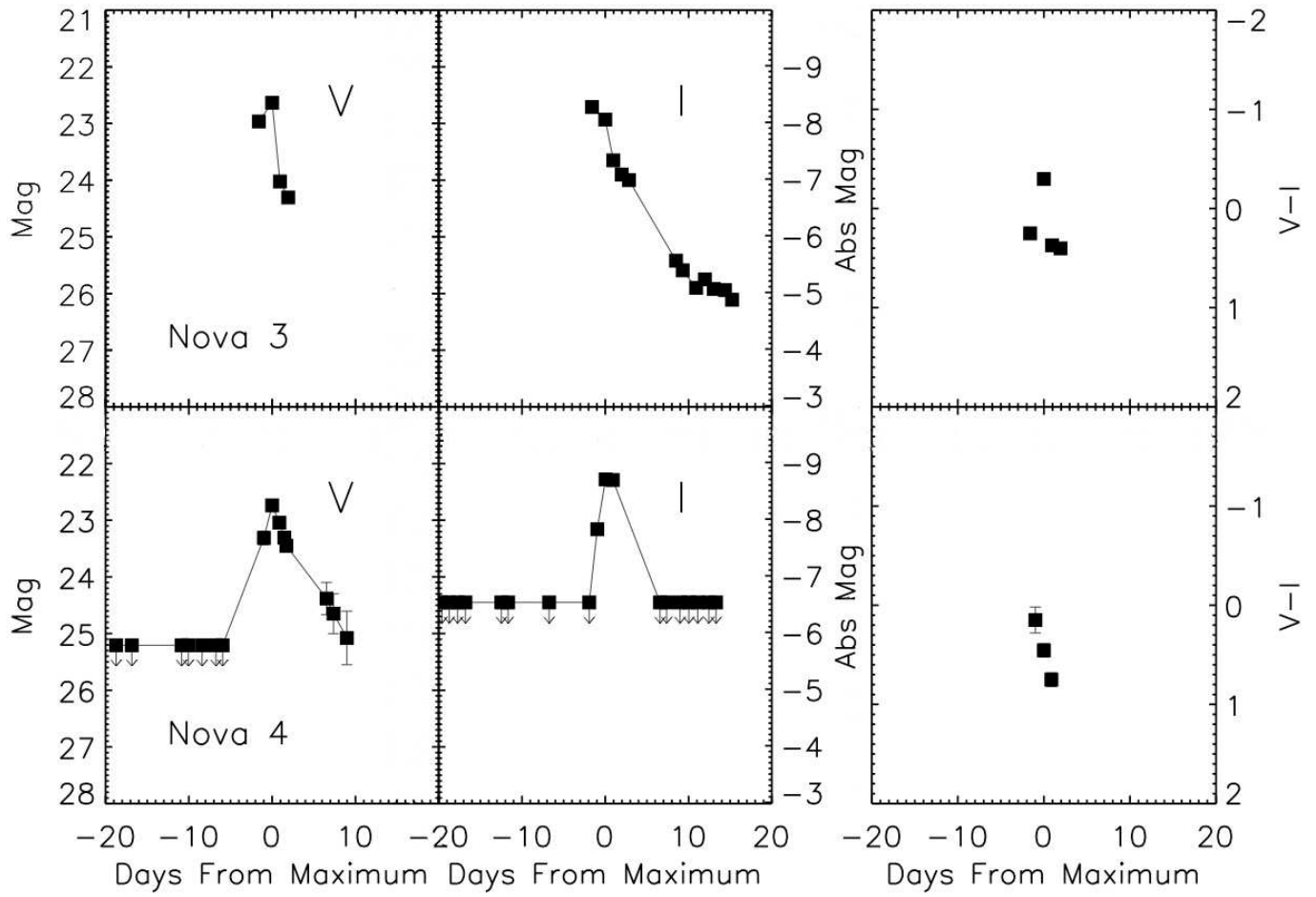


Figure 3b. Same as Figure 3a, except for novae 3 and 4.

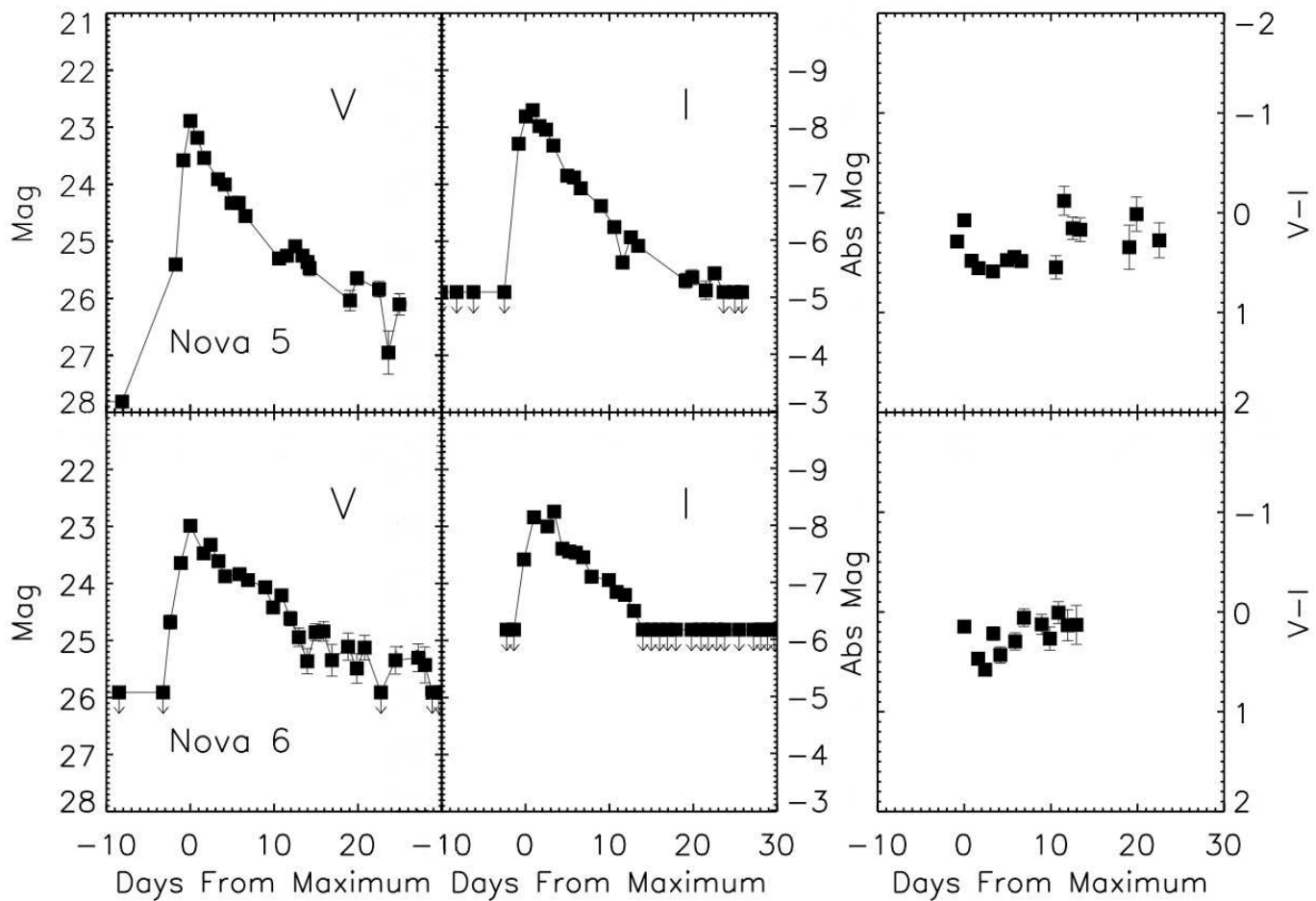


Figure 3c. Same as Figure 3a, except for novae 5 and 6

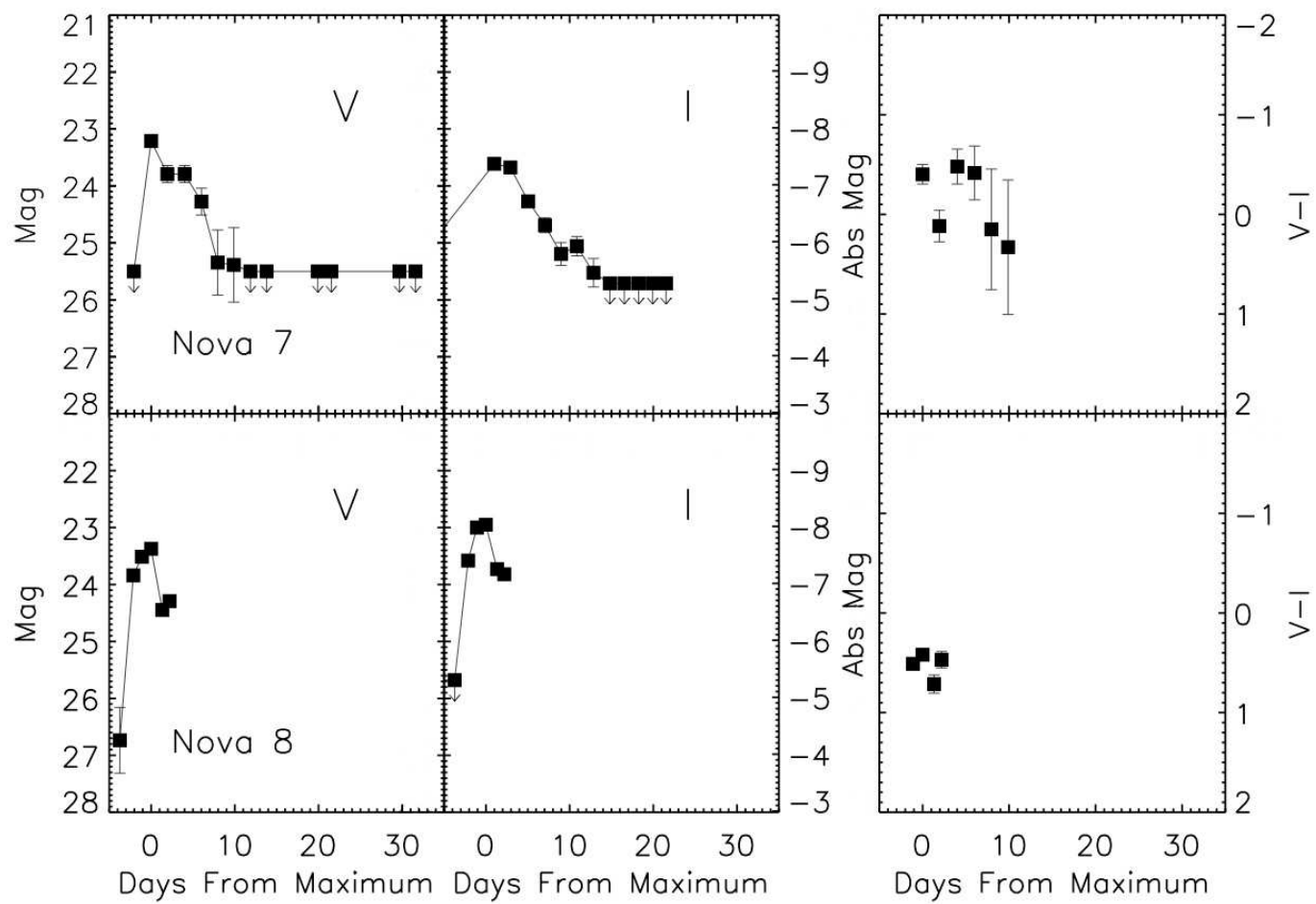


Figure 3d. Same as Figure 3a, except for novae 7 and 8.

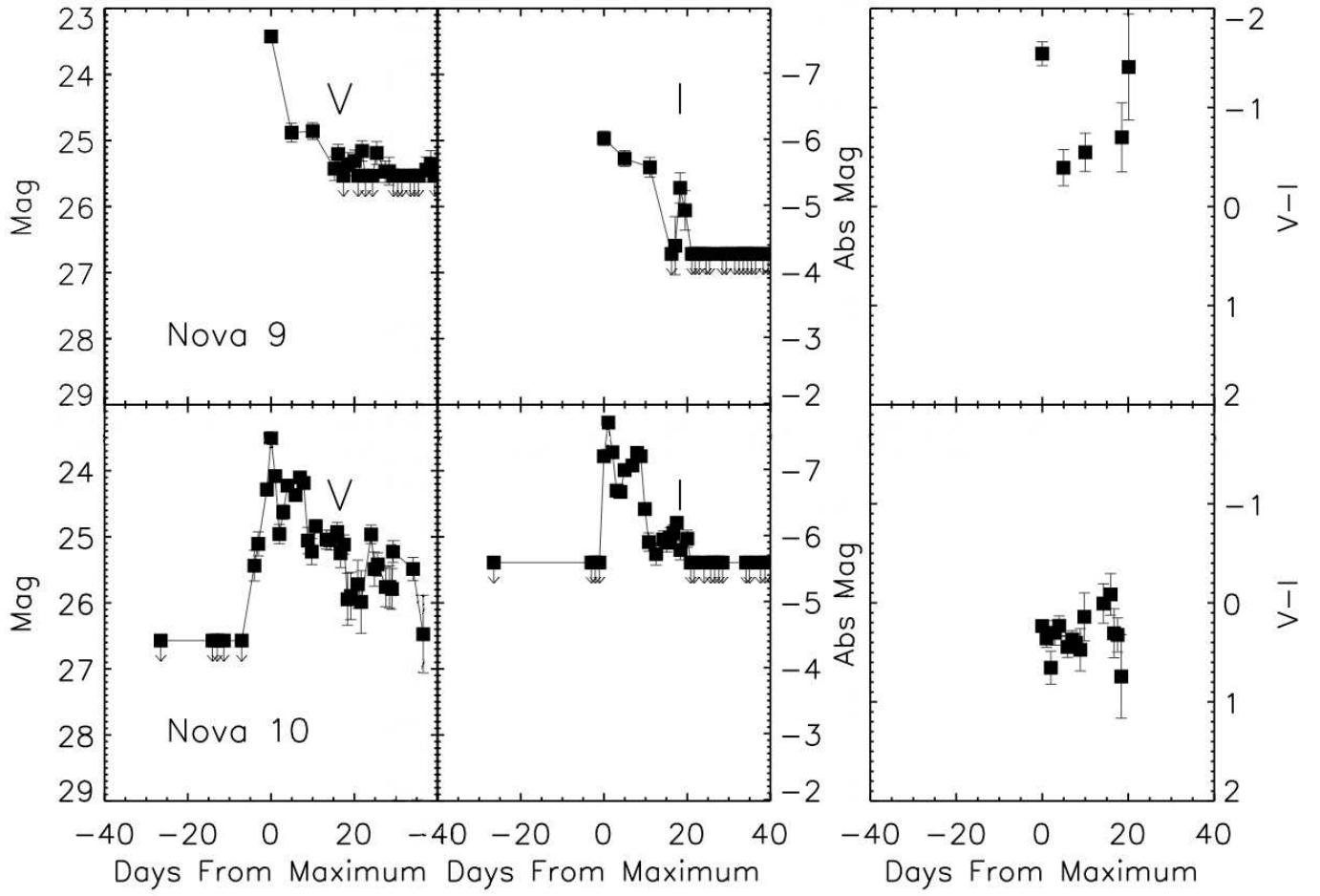


Figure 3e. Same as Figure 3a, except for novae 9 and 10.

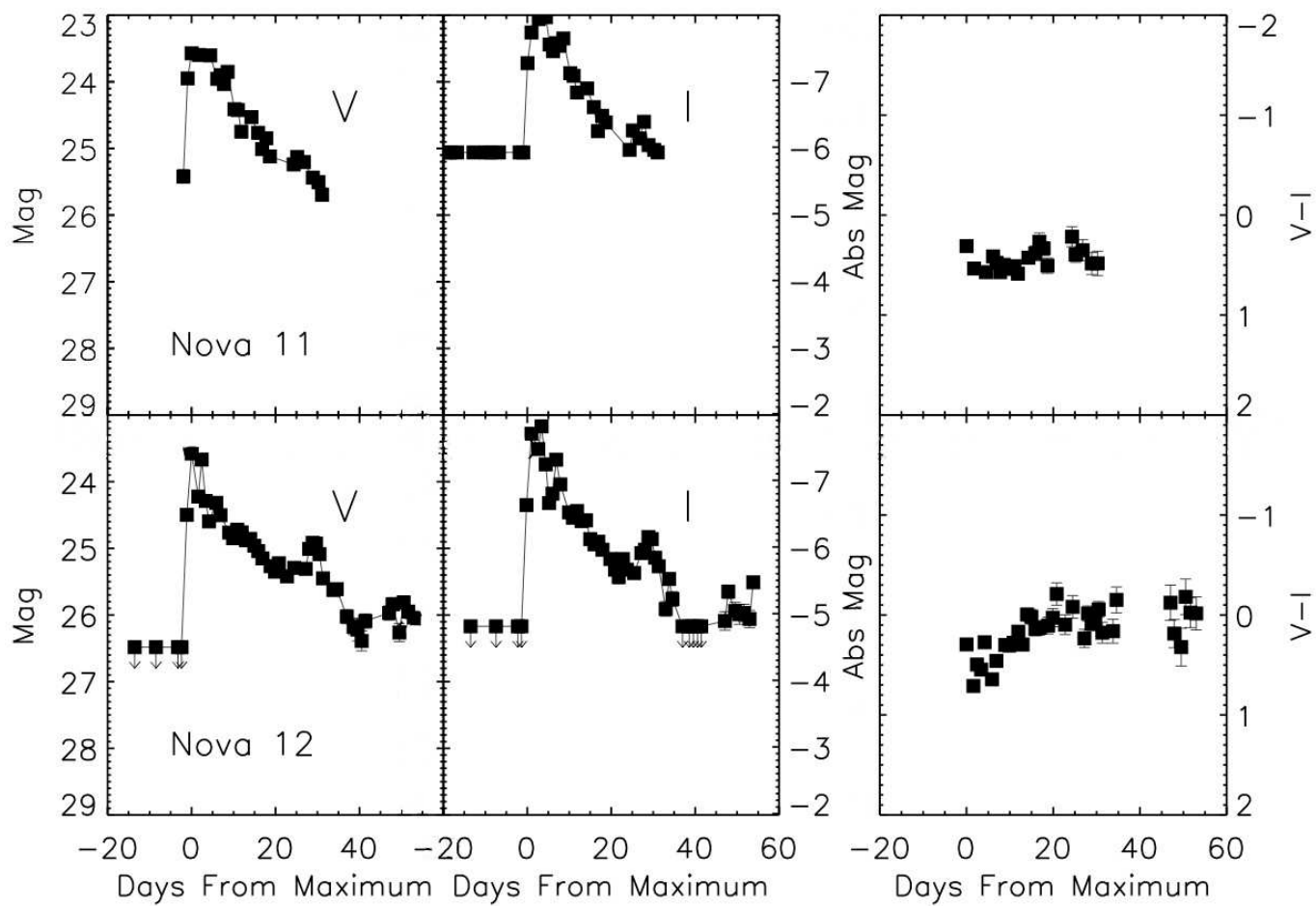


Figure 3f. Same as Figure 3a, except for novae 11 and 12.

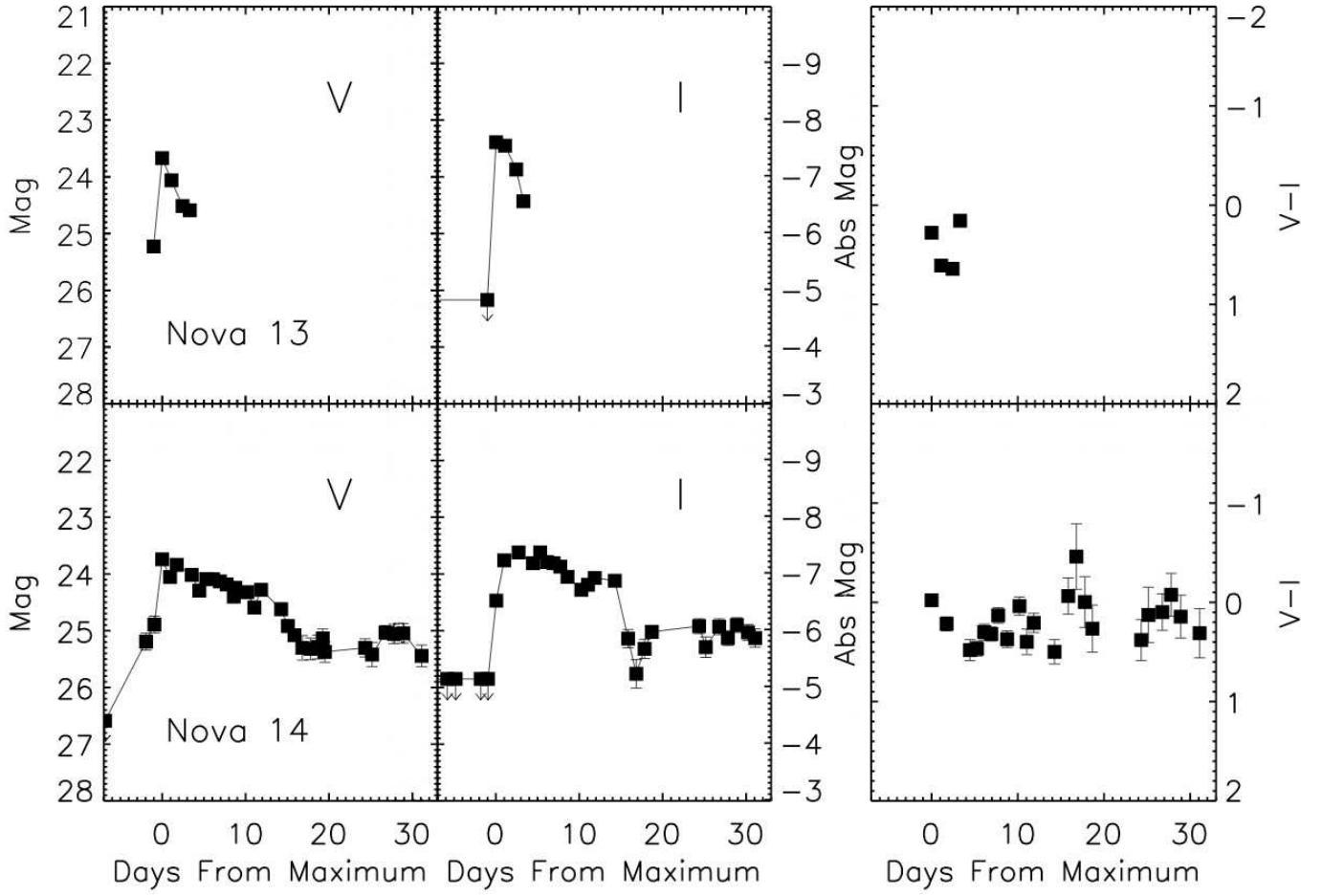


Figure 3g. Same as Figure 3a, except for novae 13 and 14.

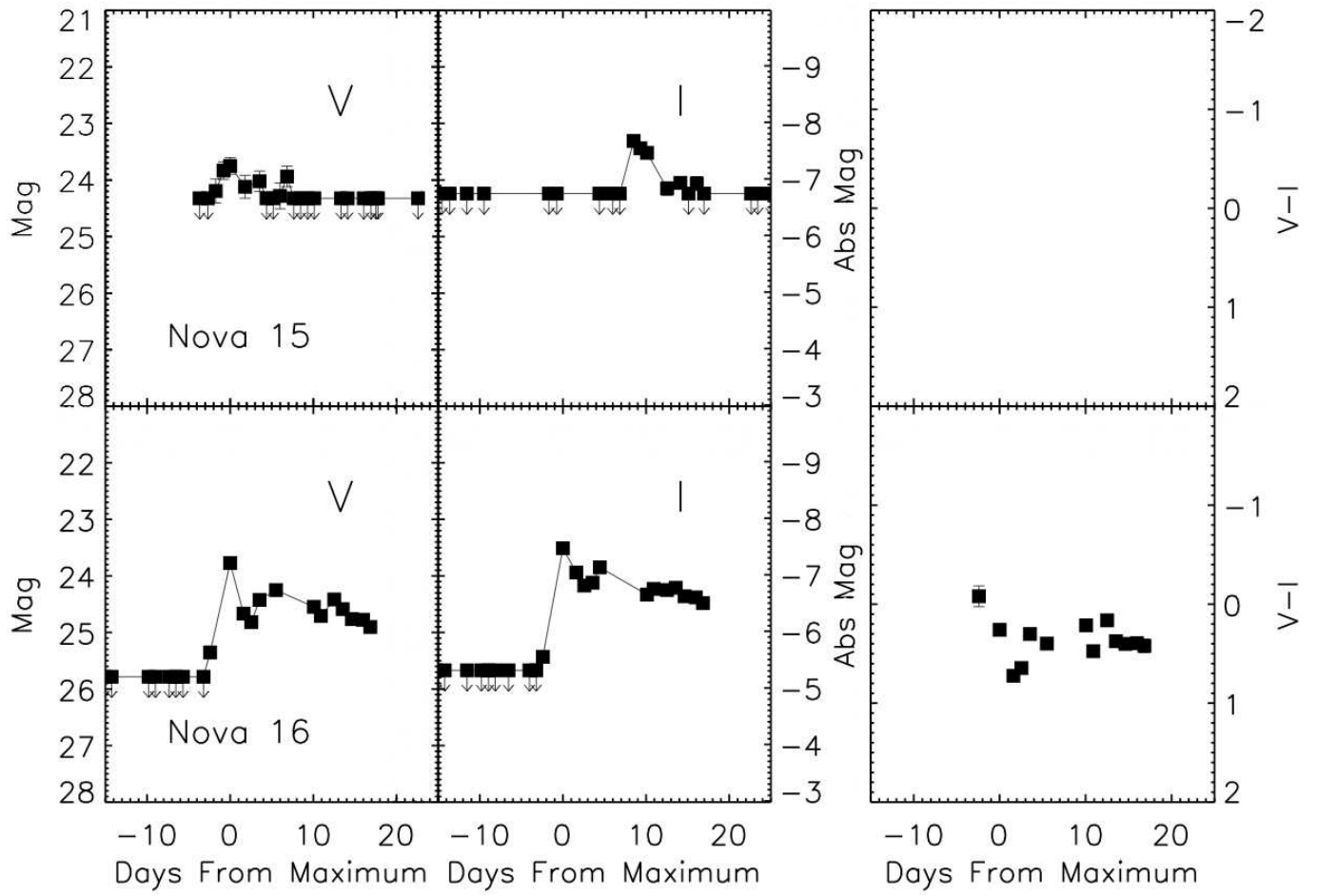


Figure 3h. Same as Figure 3a, except for novae 15 and 16.

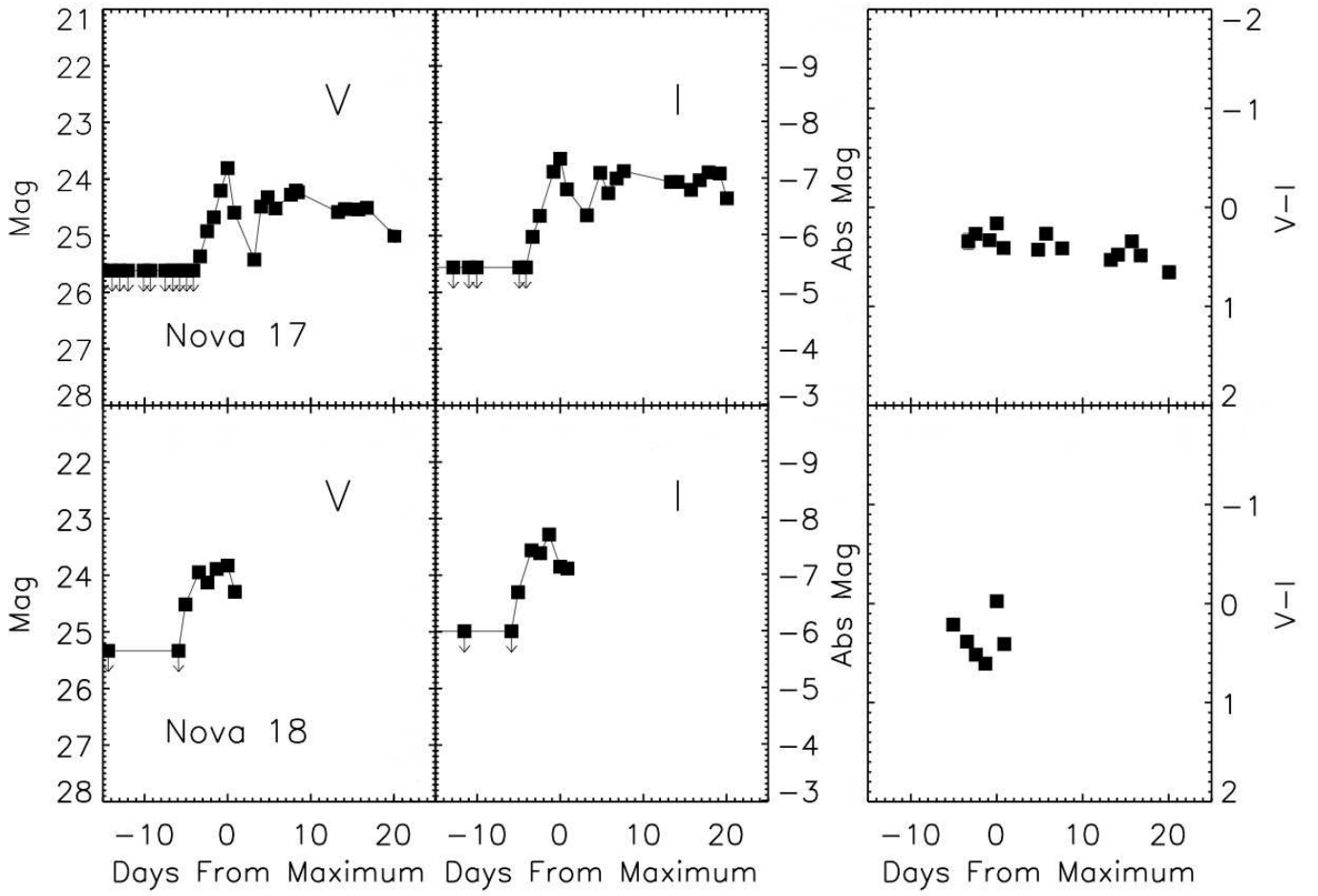


Figure 3i. Same as Figure 3a, except for novae 17 and 18.

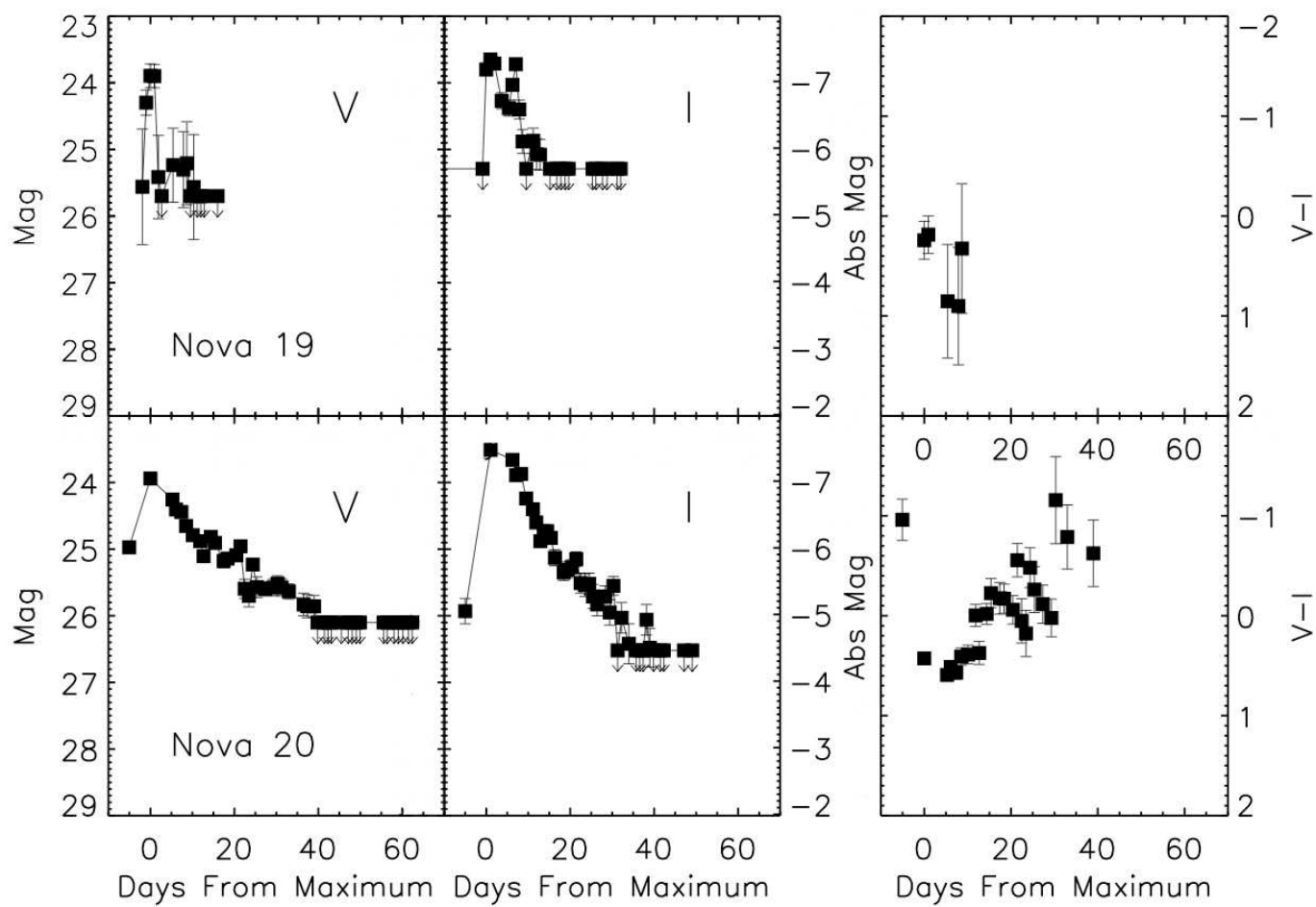


Figure 3j. Same as Figure 3a, except for novae 19 and 20.

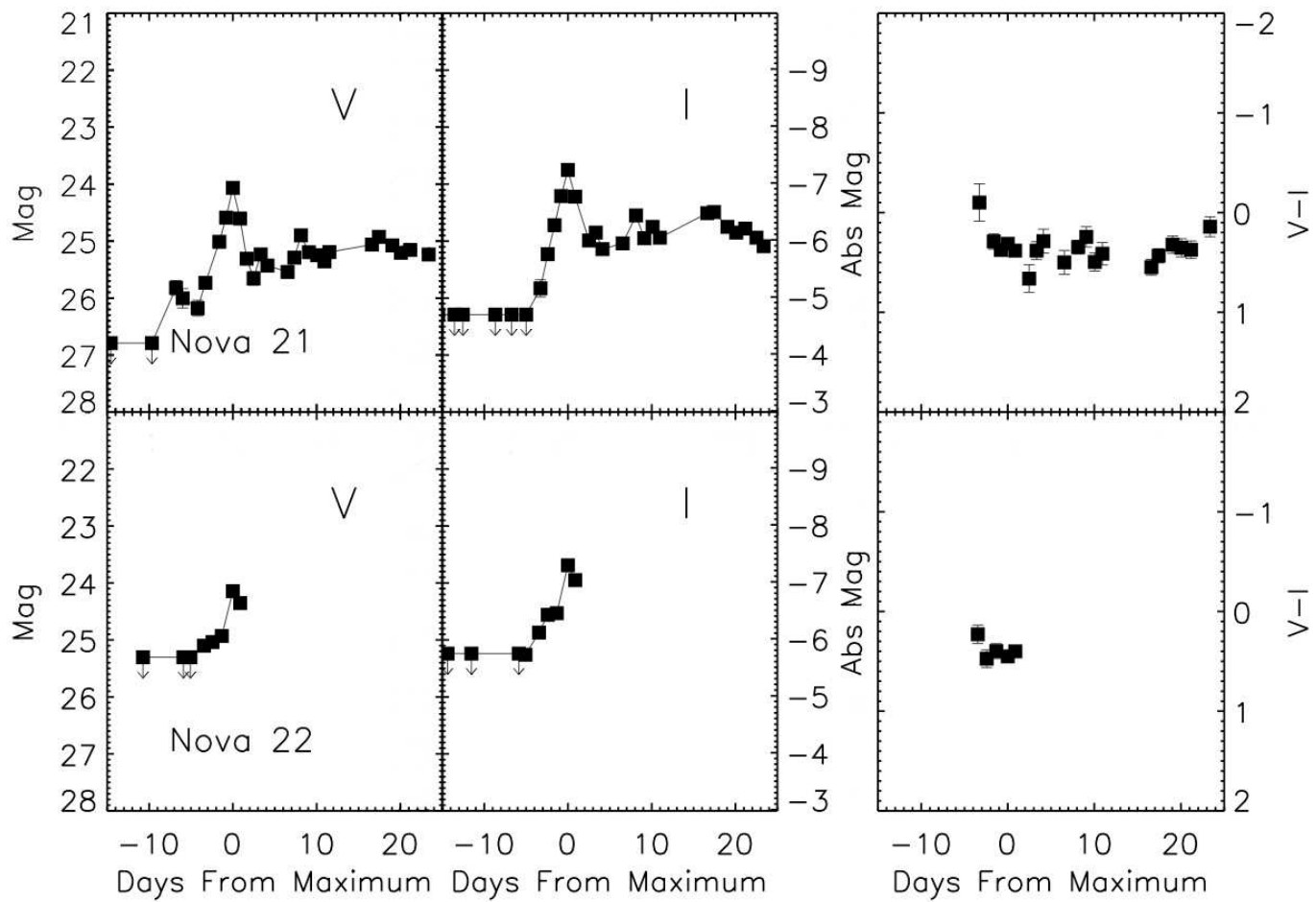


Figure 3k. Same as Figure 3a, except for novae 21 and 22.

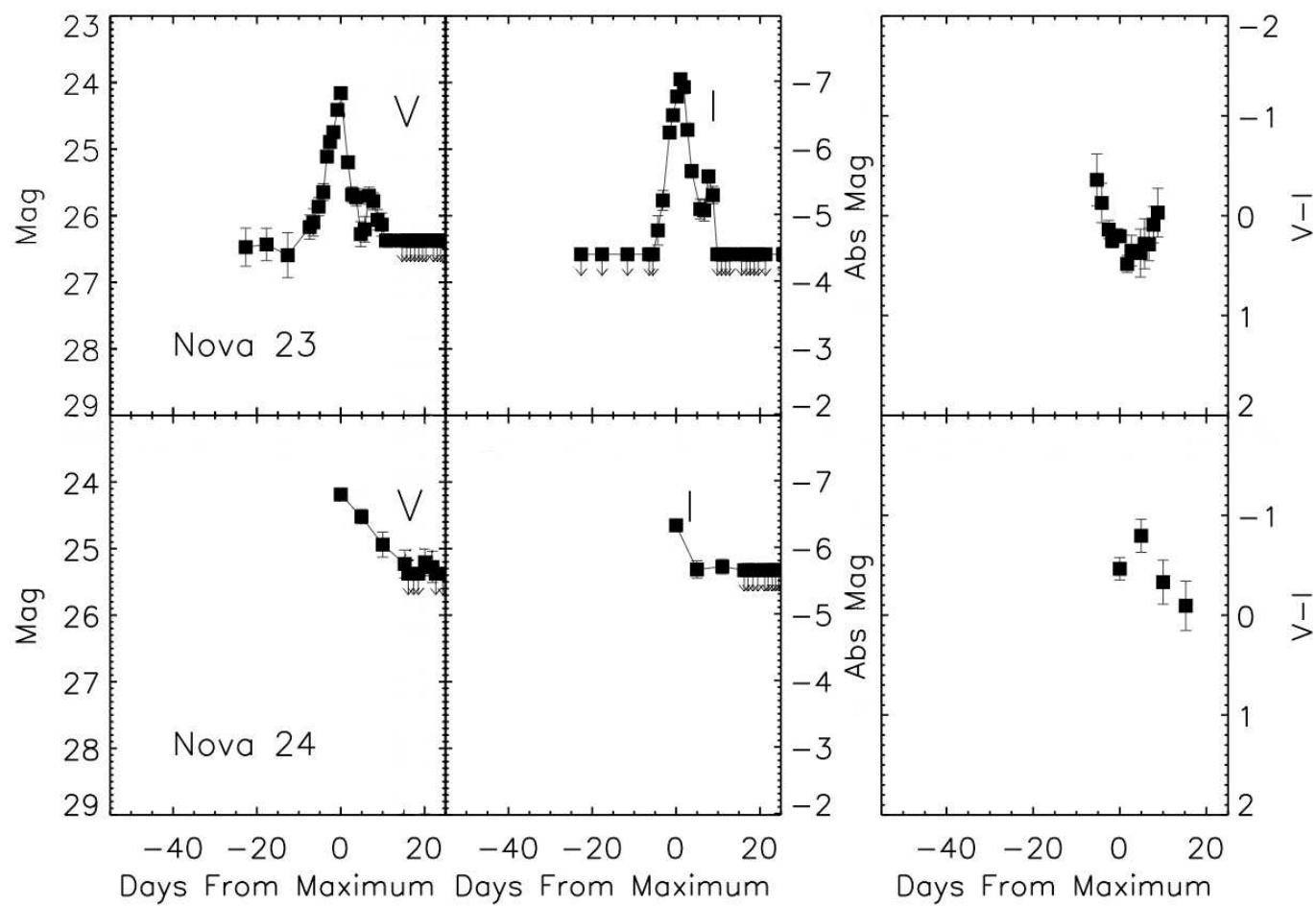


Figure 31. Same as Figure 3a, except for novae 23 and 24.

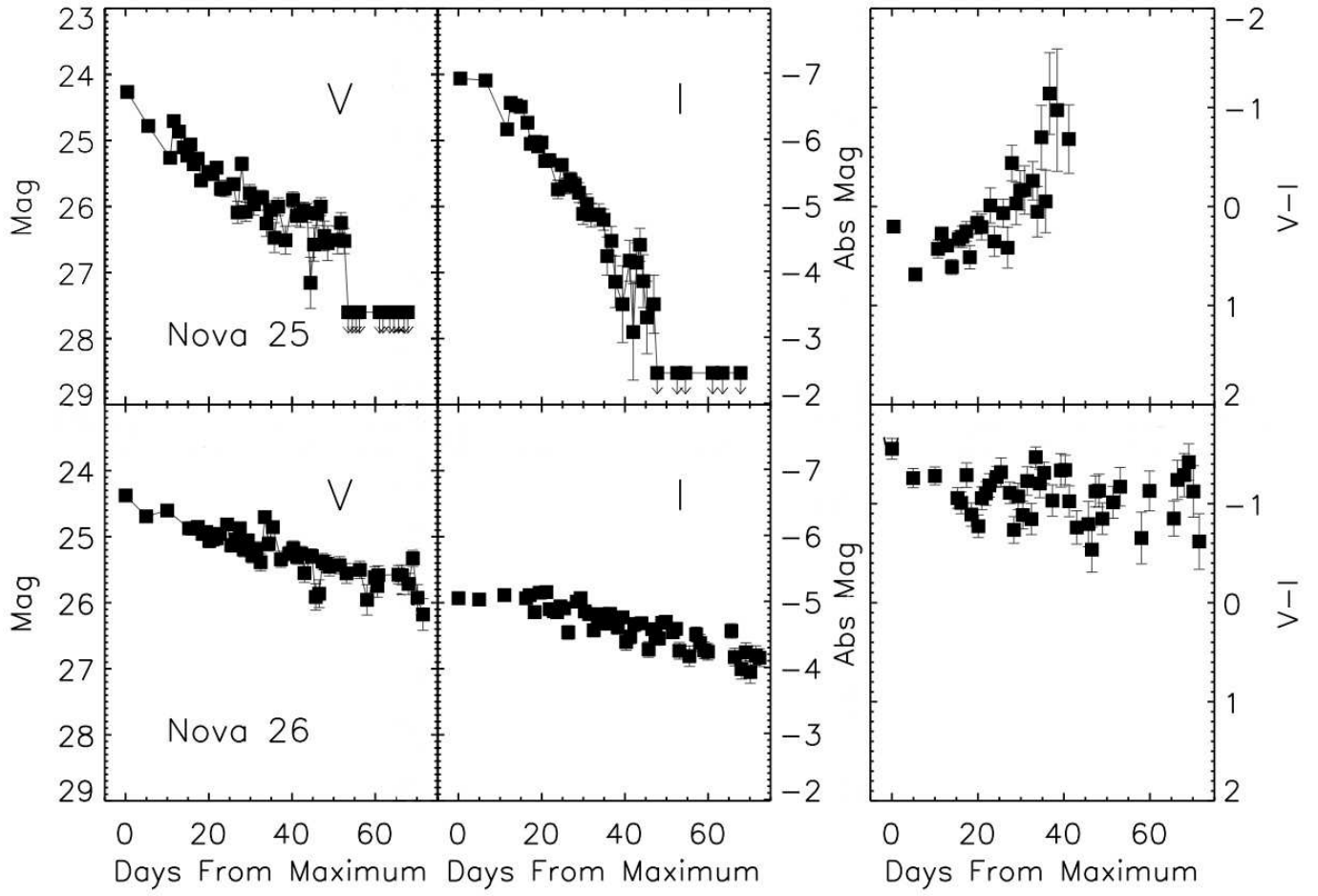


Figure 3m. Same as Figure 3a, except for novae 25 and 26.

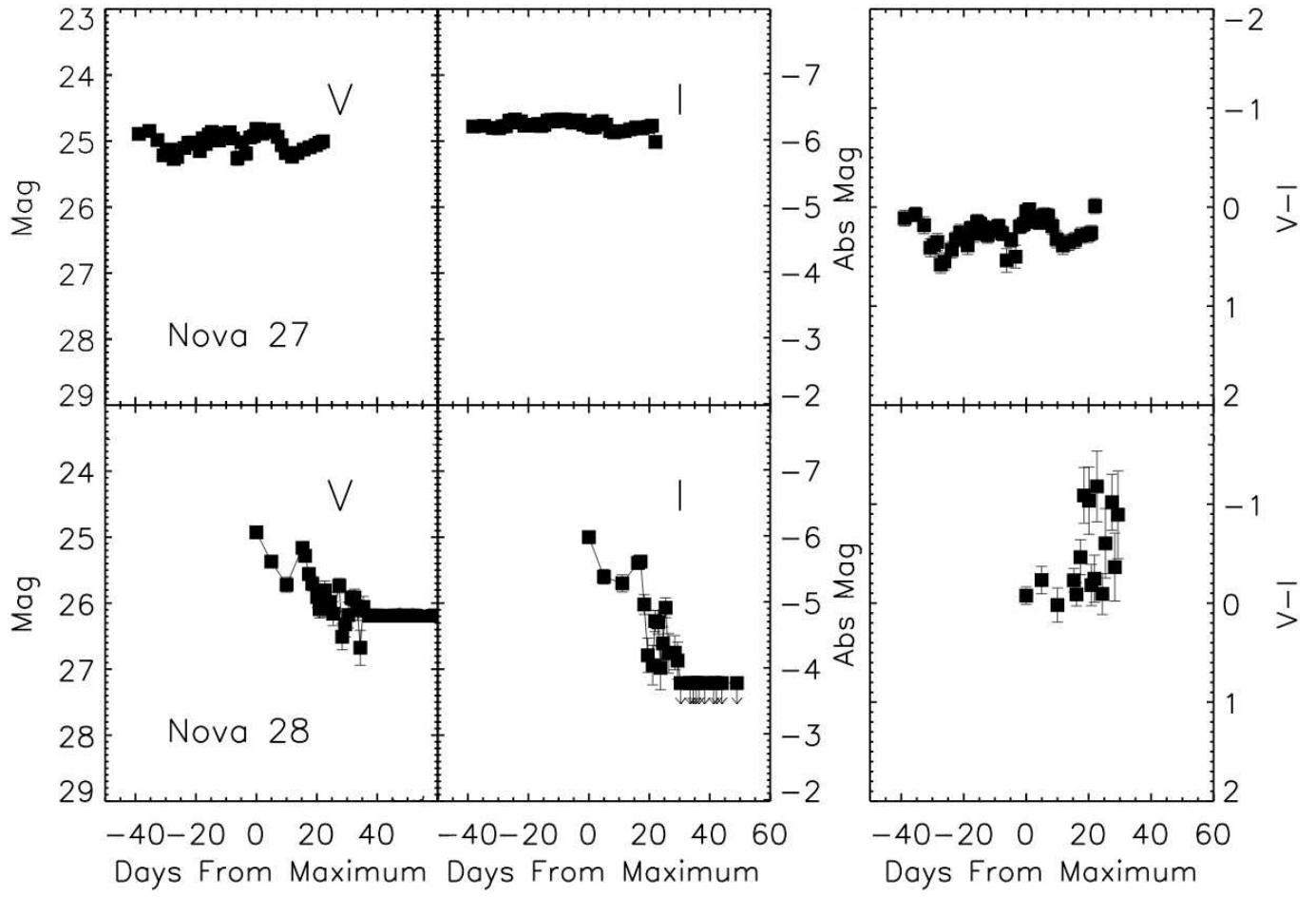


Figure 3n. Same as Figure 3a, except for novae 27 and 28.

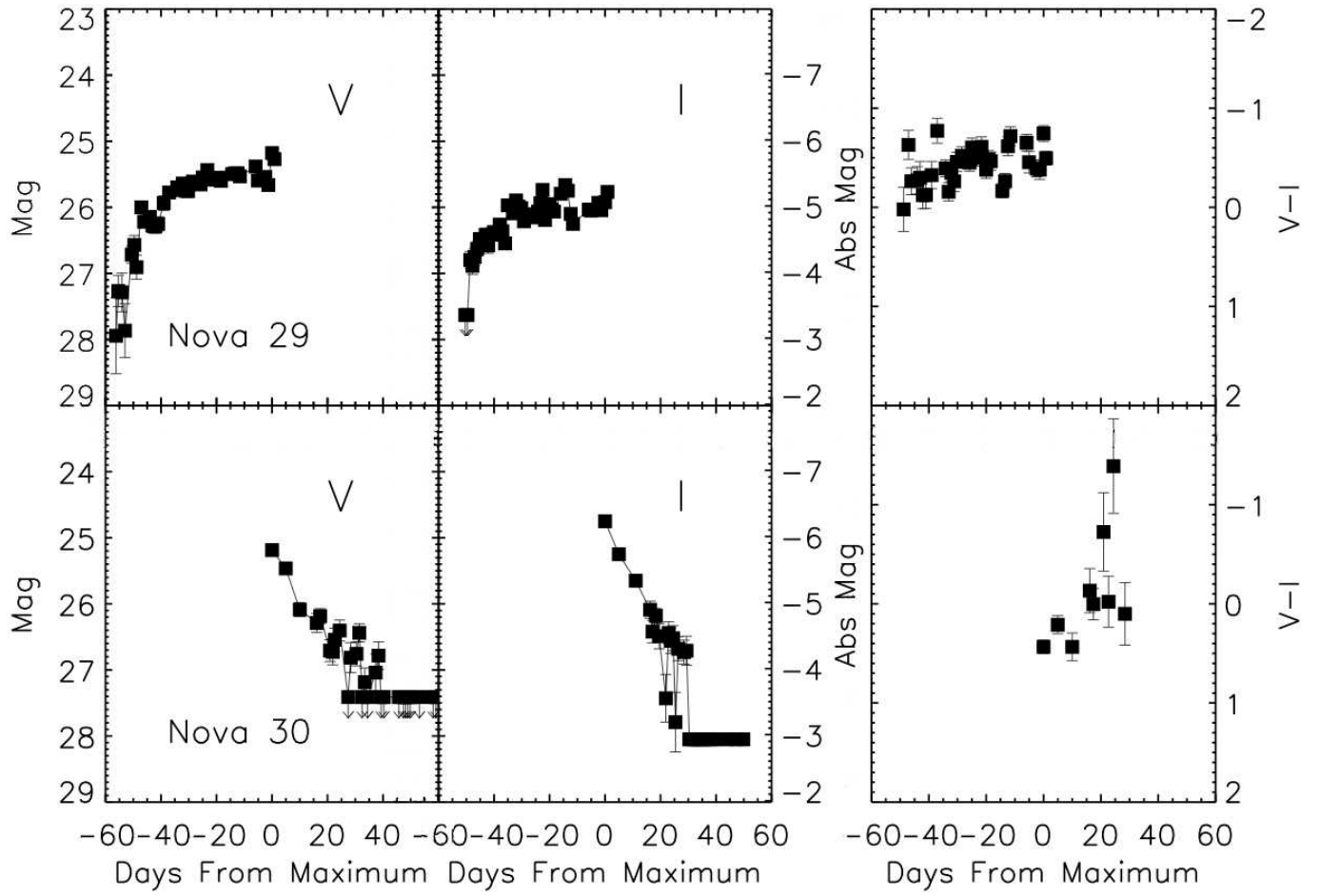


Figure 3o. Same as Figure 3a, except for novae 29 and 30.

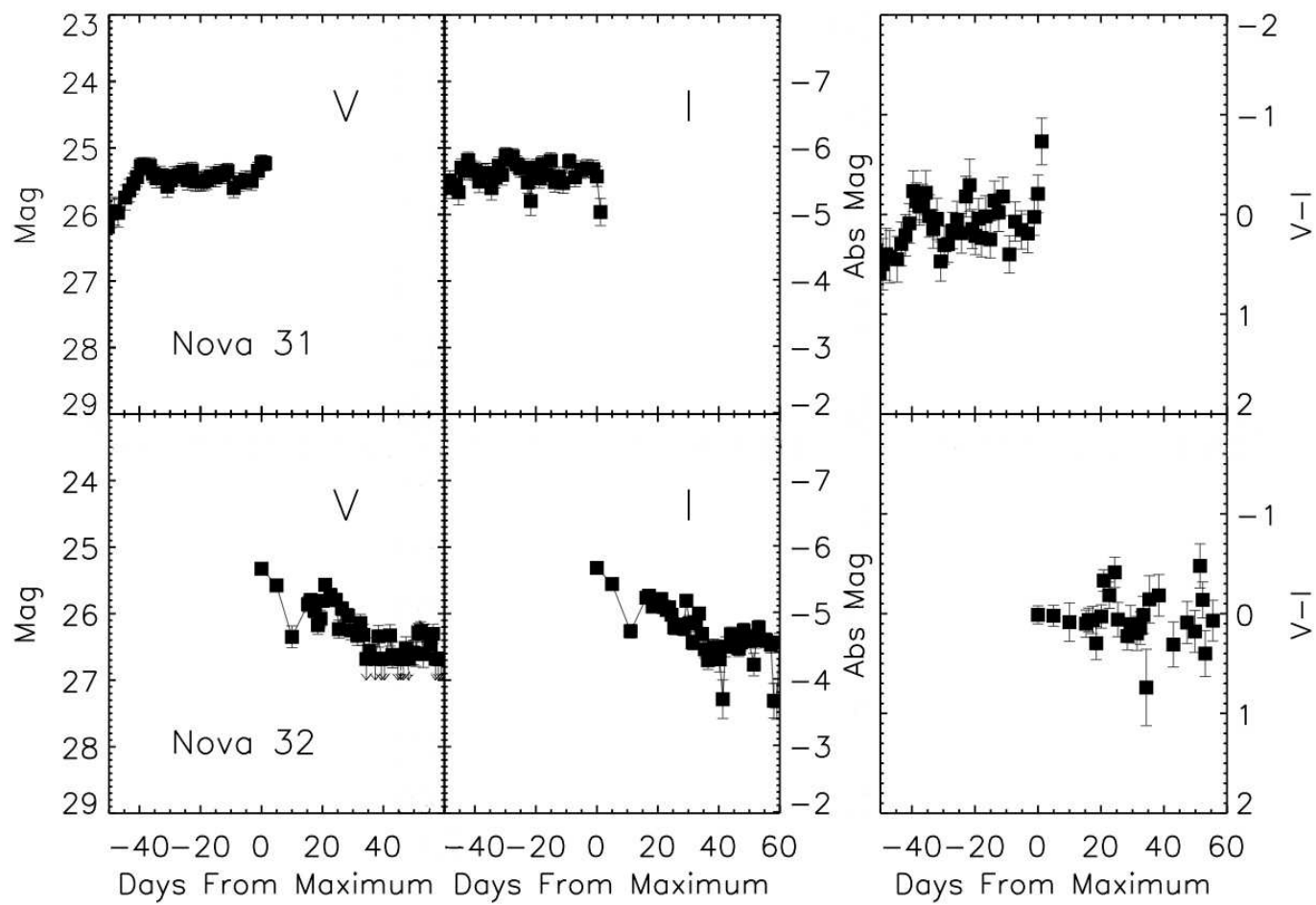


Figure 3p. Same as Figure 3a, except for novae 31 and 32.

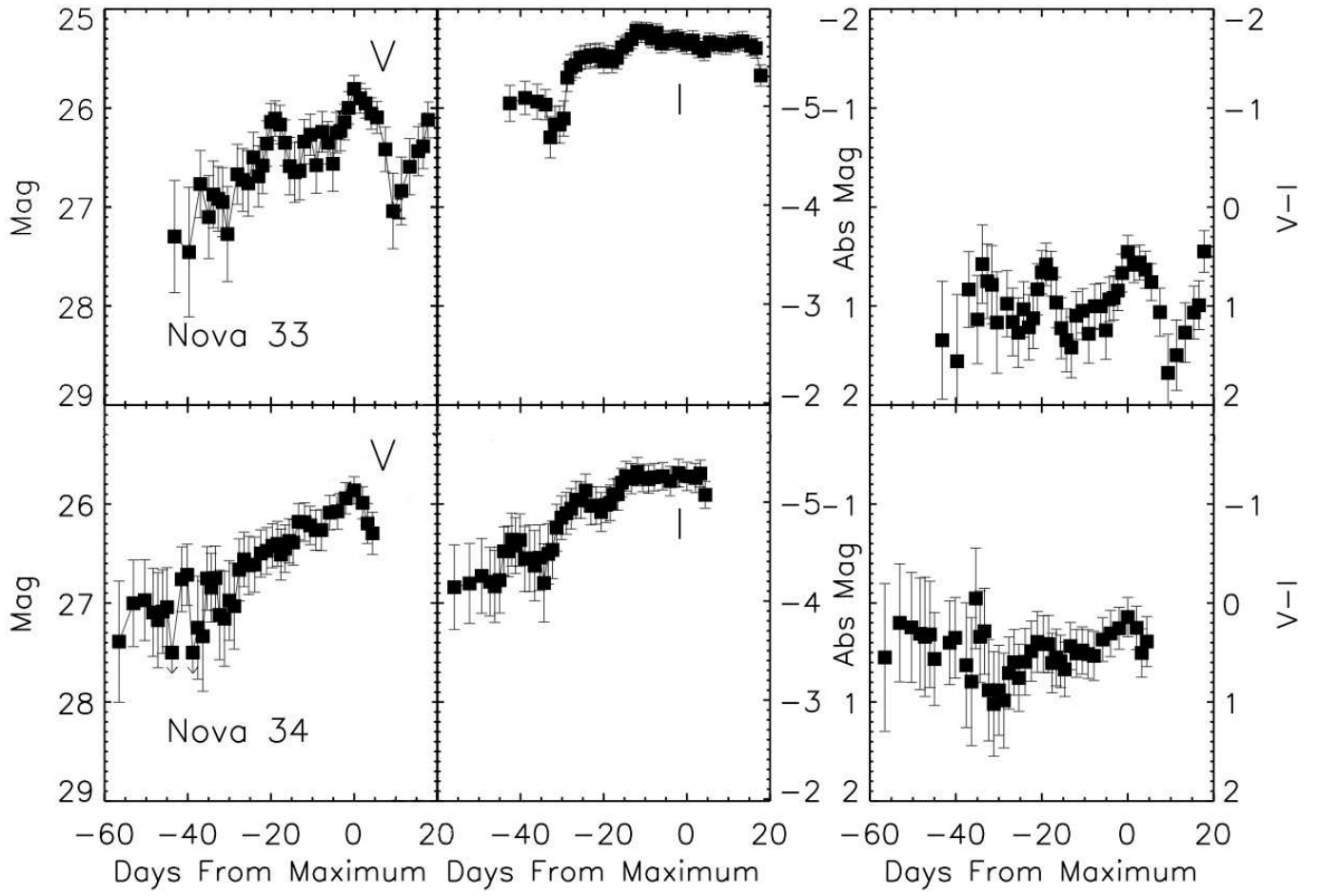


Figure 3q. Same as Figure 3a, except for novae 33 and 34.

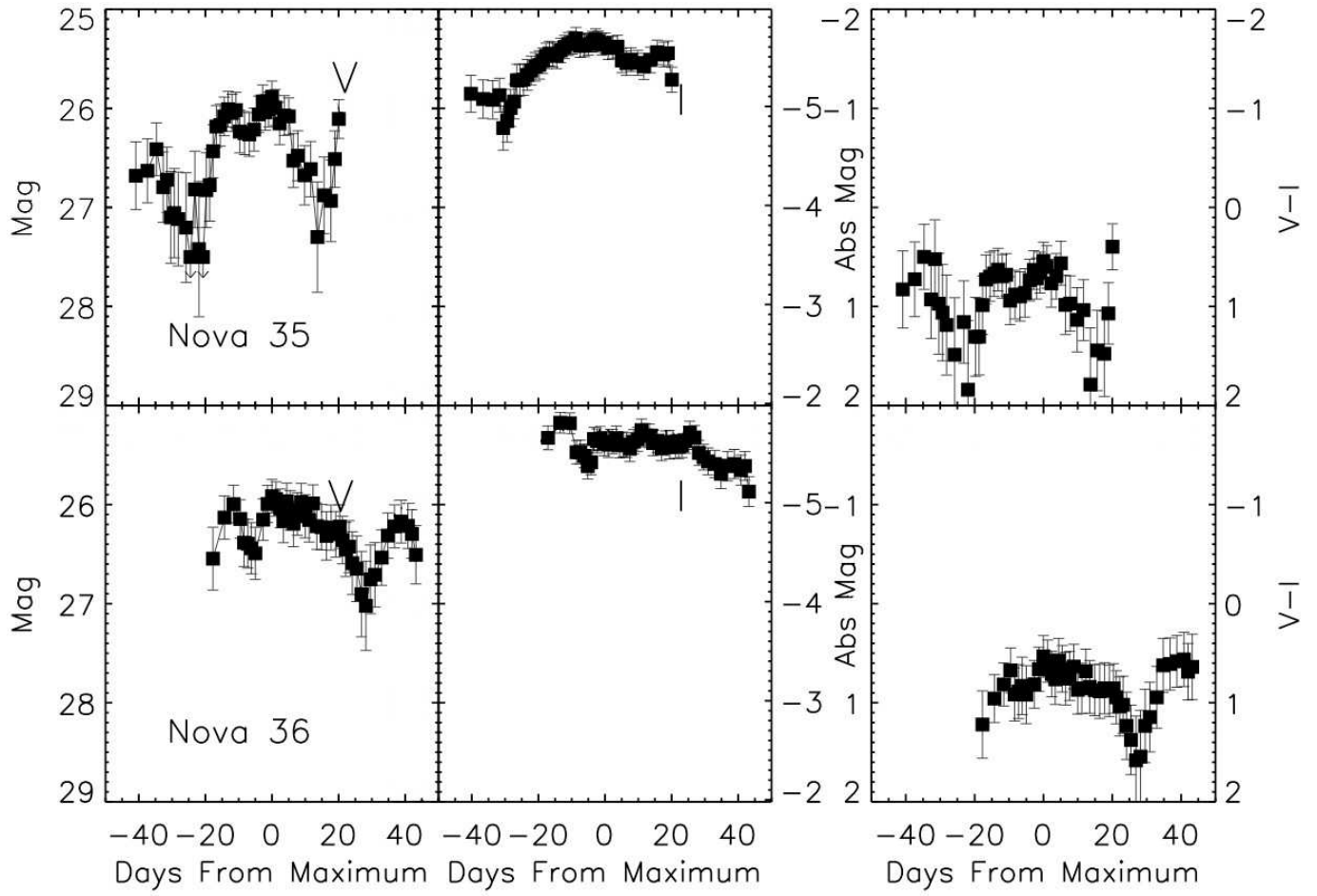


Figure 3r. Same as Figure 3a, except for novae 35 and 36.

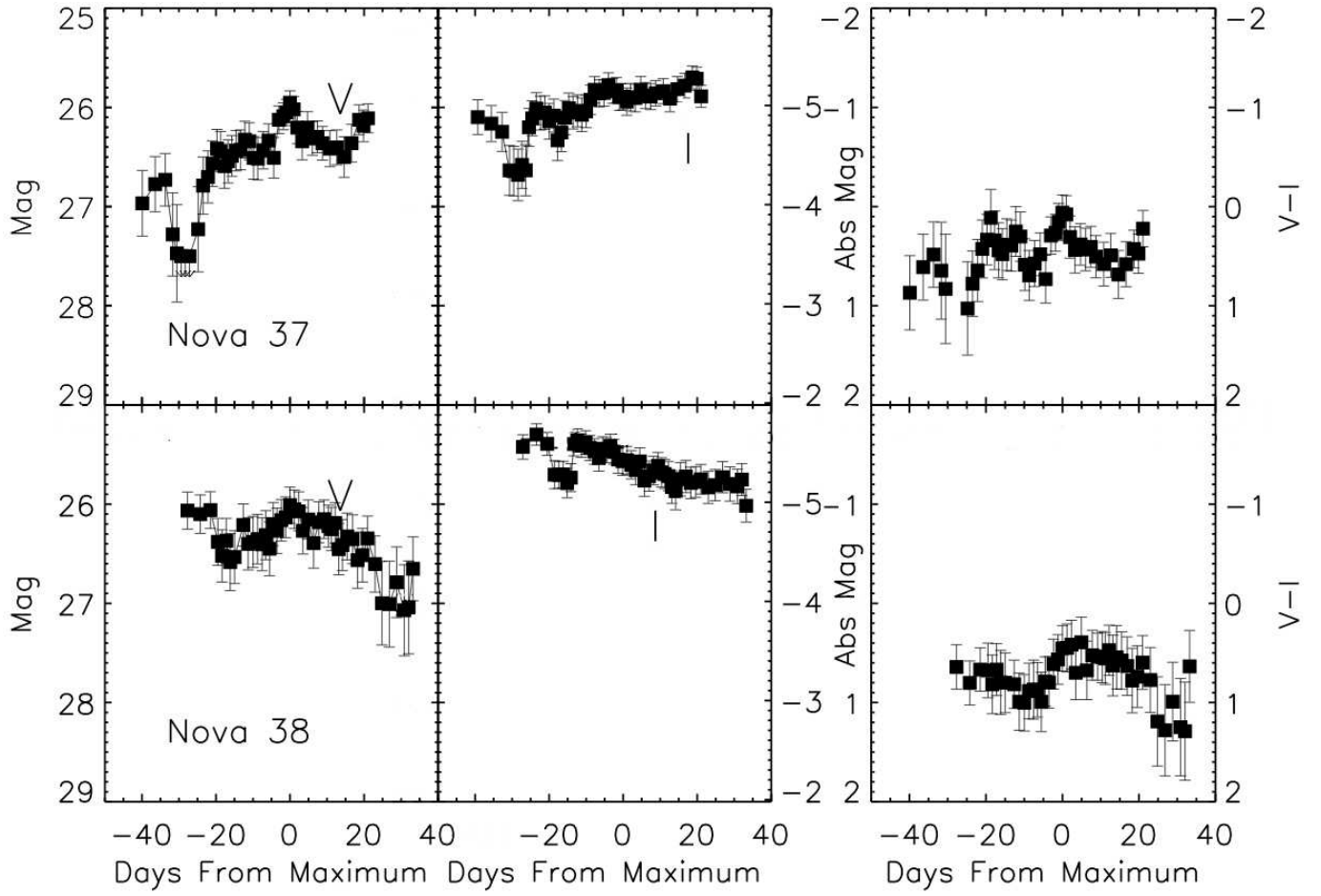


Figure 3s. Same as Figure 3a, except for novae 37 and 38.

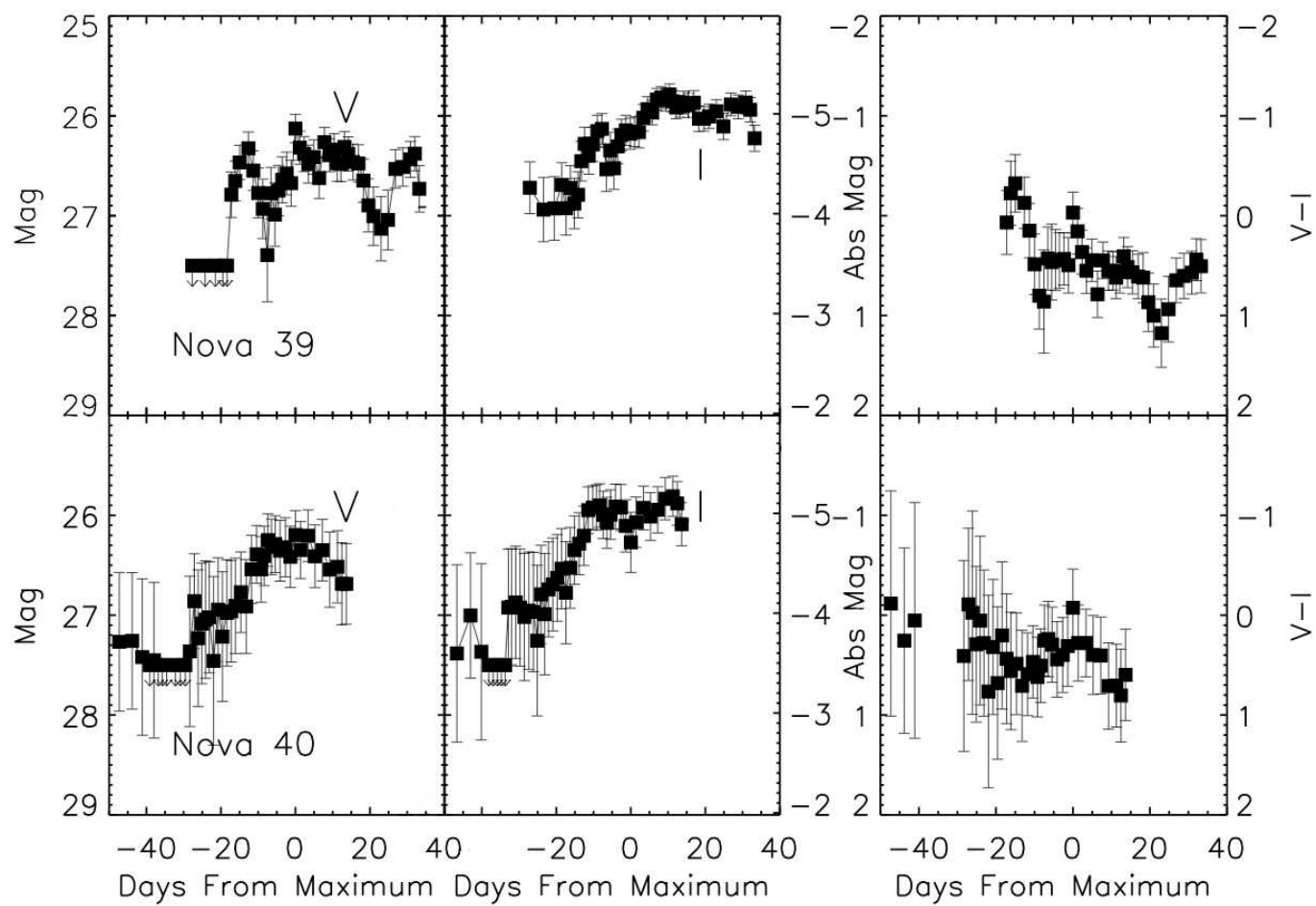


Figure 3t. Same as Figure 3a, except for novae 39 and 40.

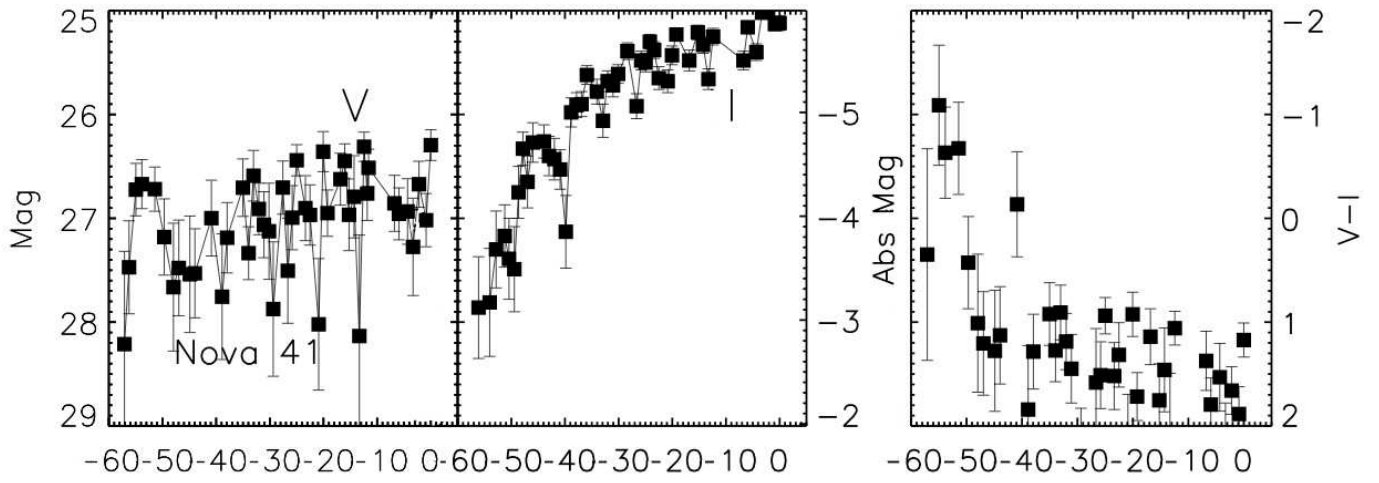


Figure 3u. Same as Figure 3a, except for nova 41.

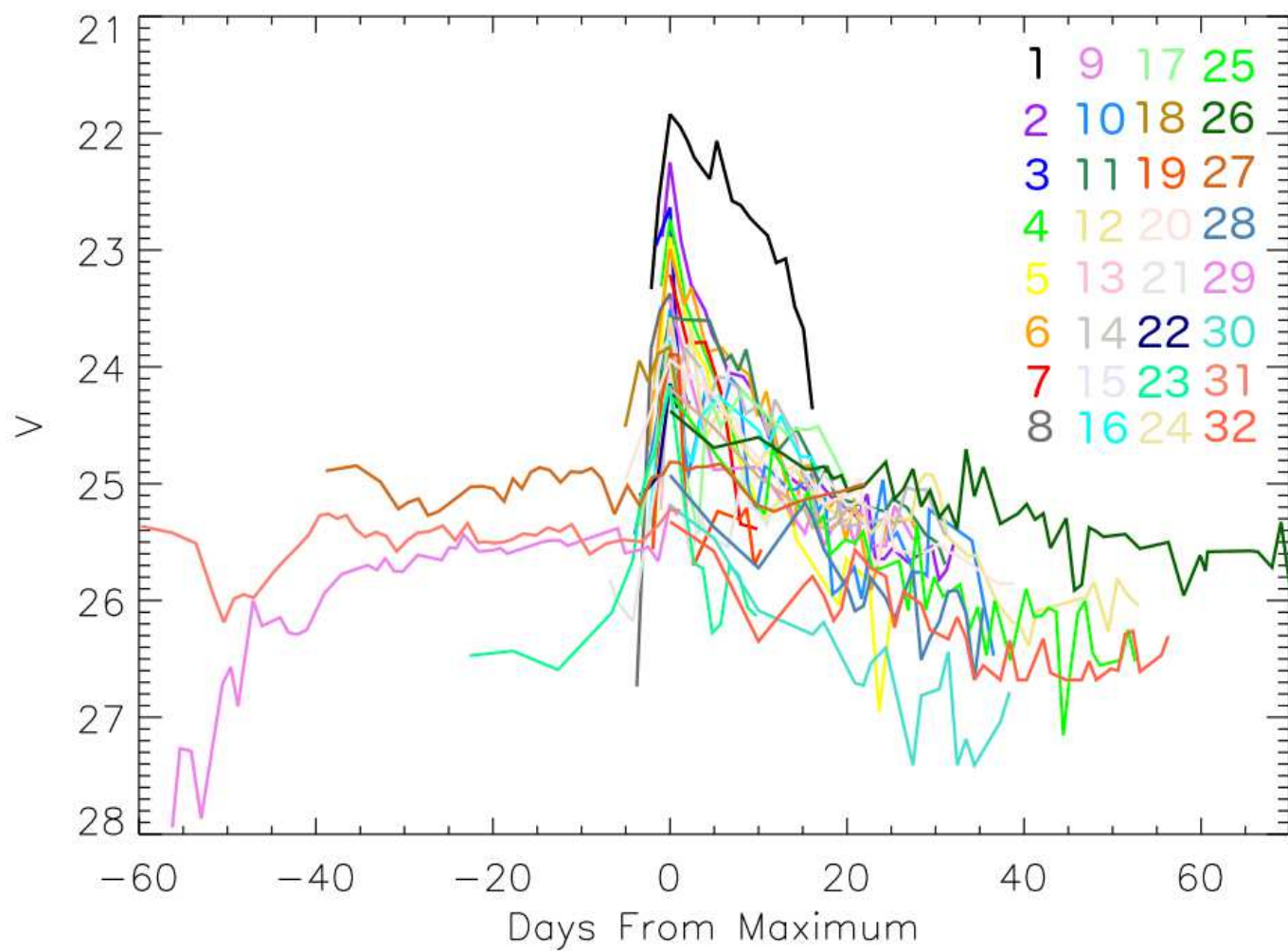


Figure 4a. 32 M87 nova *V* light curves overplotted as a function of days from maximum light. The 32 colored integers identify the 32 classical nova light curves with the same 32 novae displayed in Figures 1, 2 and 3.

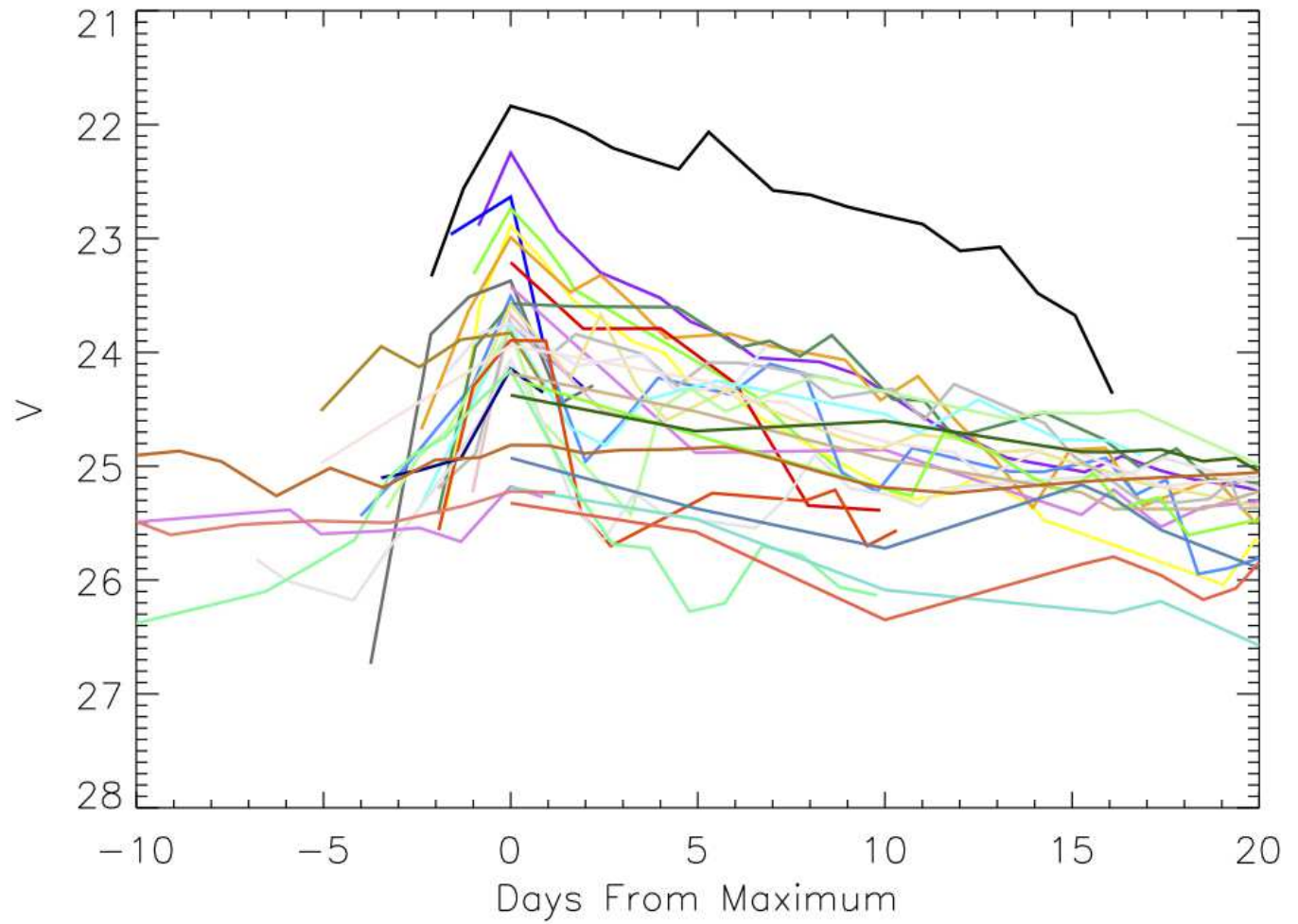


Figure 4b. Figure 4a zoomed in for more detail around the peak magnitude. The same color-coding scheme is used here, and in Figures 5 through 8, inclusive.

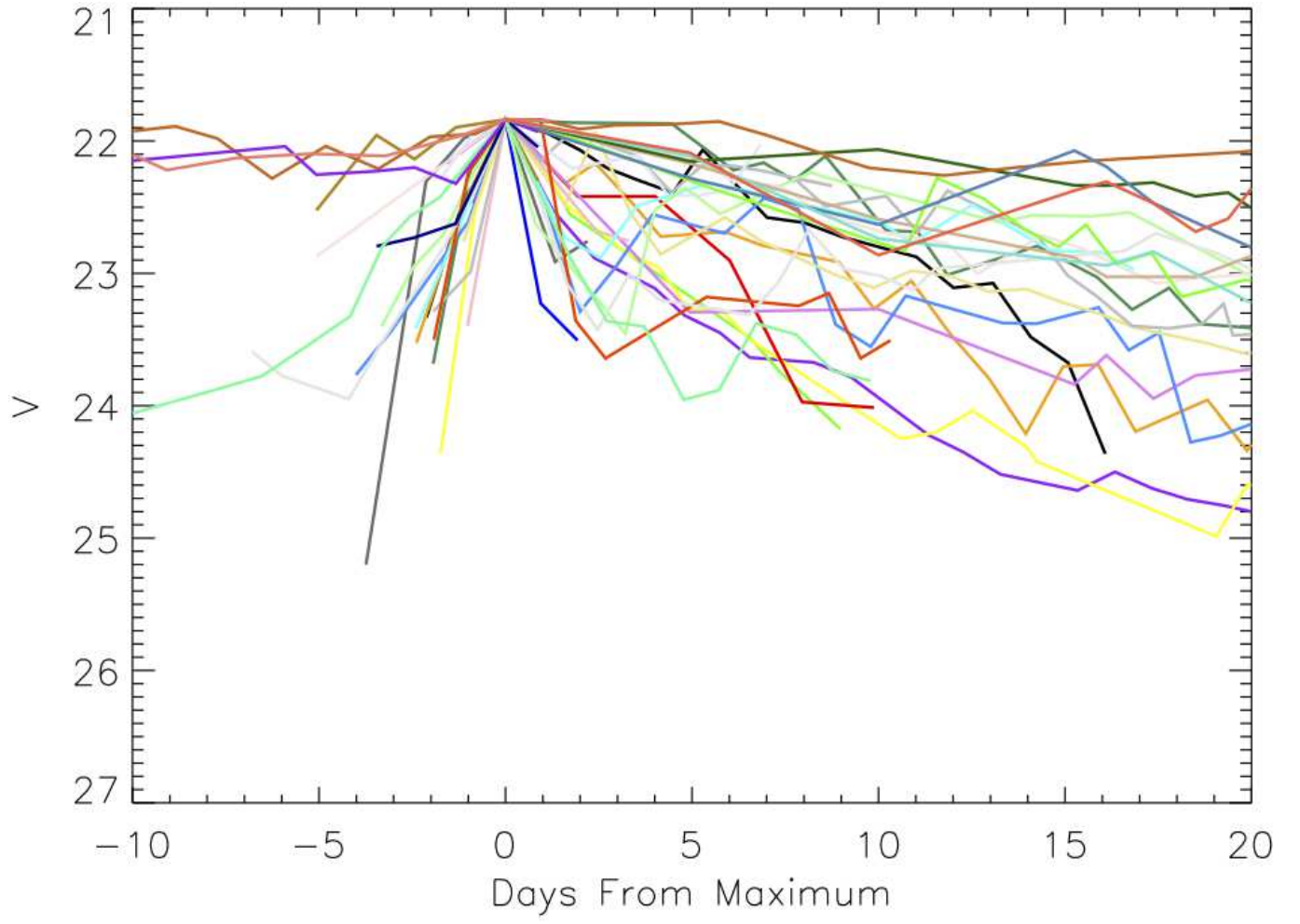


Figure 5. 32 M87 classical nova *V* light curves overplotted to the same (arbitrary) maximum *V* magnitude, zoomed in for detail.

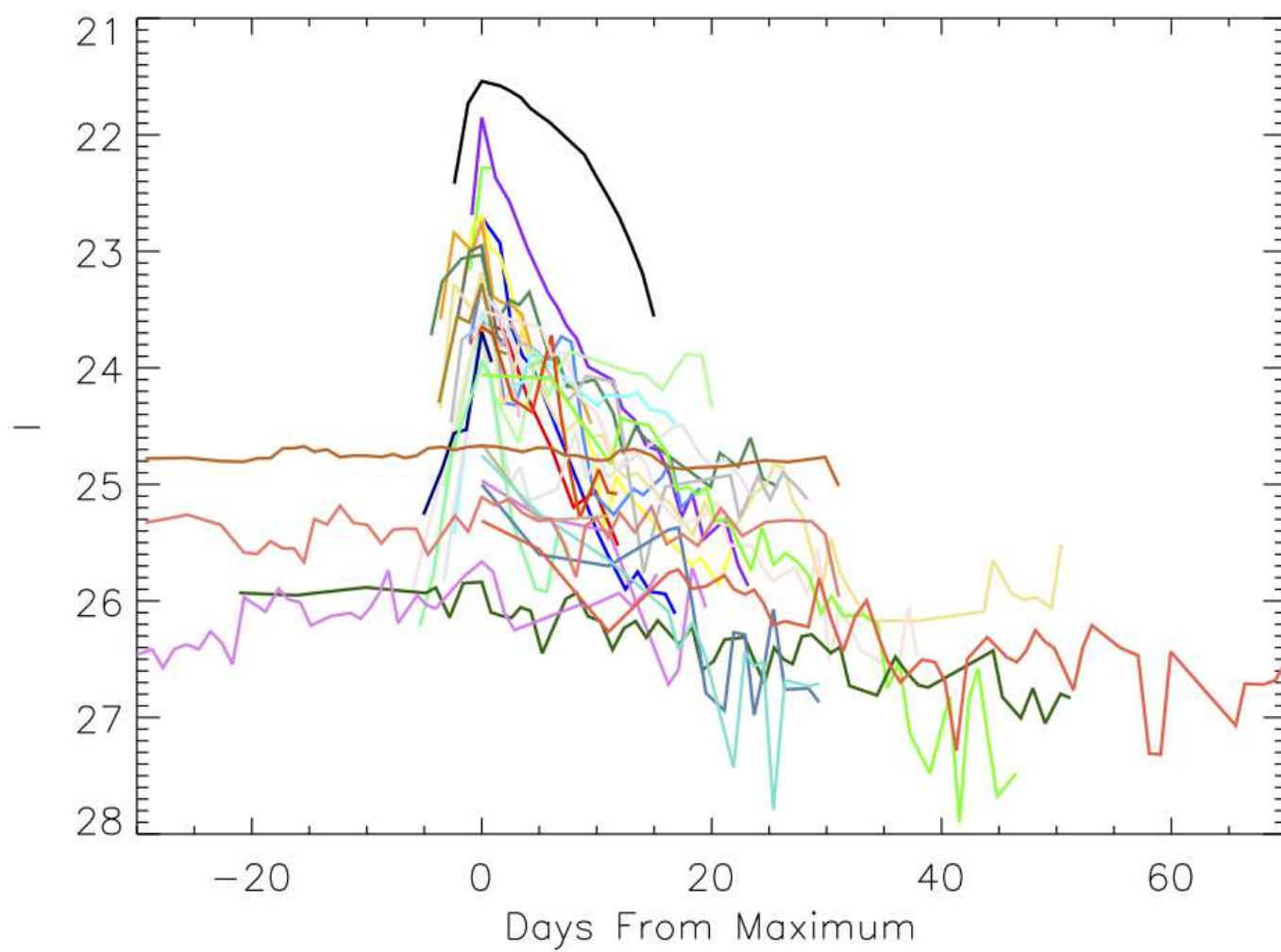


Figure 6a. 32 M87 classical nova *I* light curves overplotted as a function of days from maximum light.

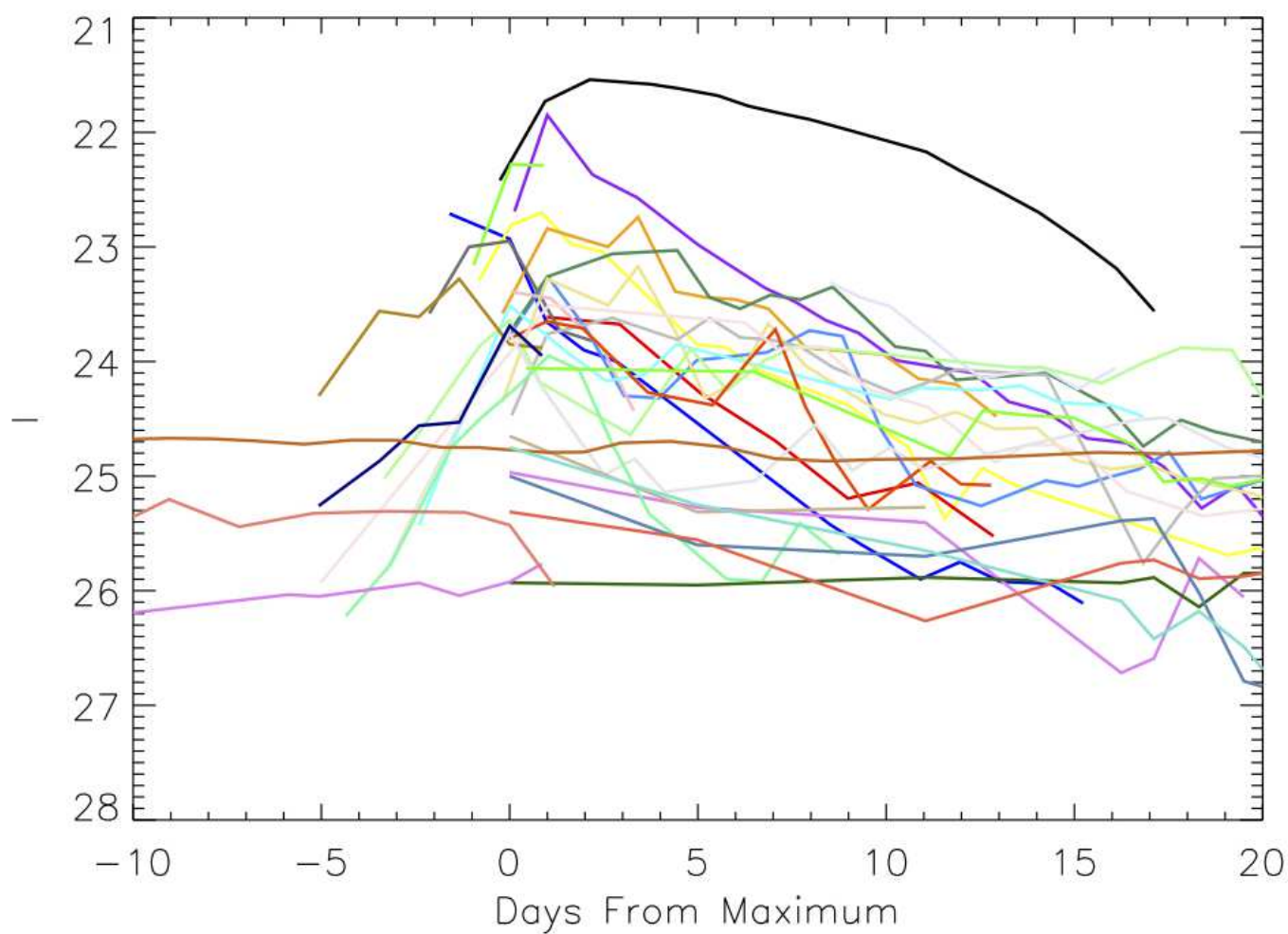


Figure 6b. Figure 6a zoomed in for more detail around the peak magnitude.

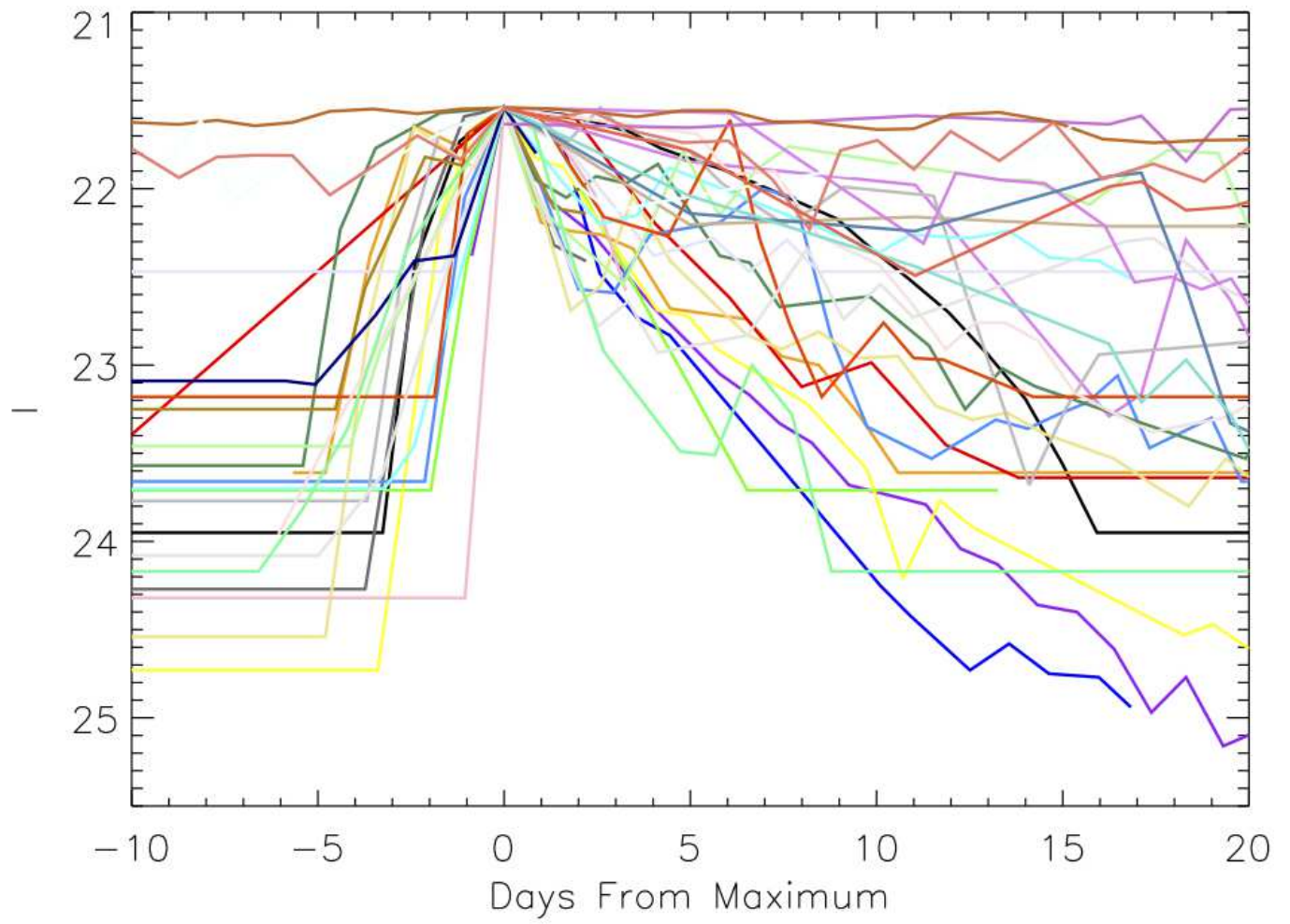


Figure 7. 32 M87 classical nova I light curves overplotted to the same (arbitrary) maximum I magnitude, zoomed in for detail.

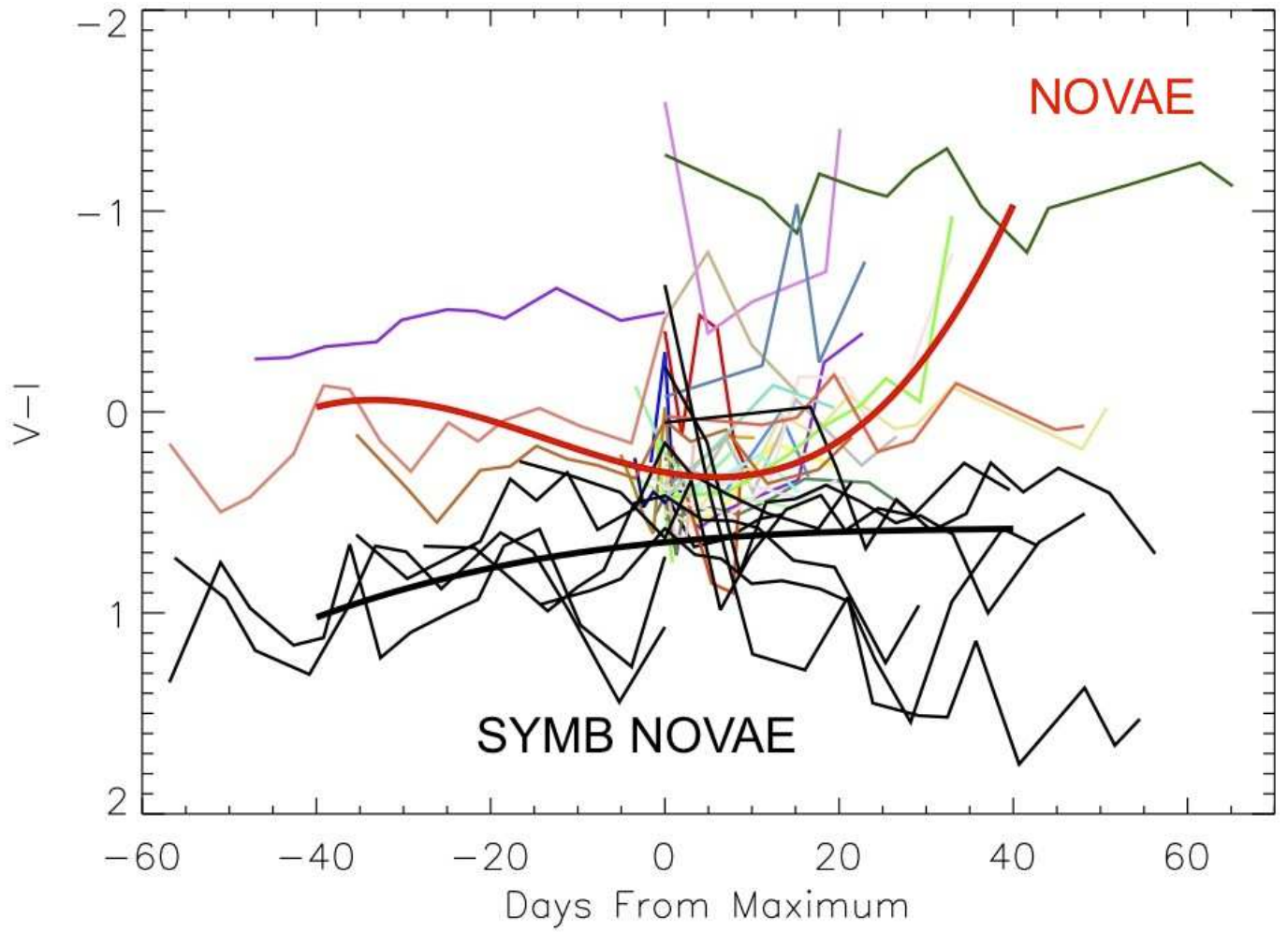


Figure 8a. Nova ($V - I$) color curves overplotted as a function of days from maximum light. The thick red line is the median of 32 classical nova color curves, while the thick black line labelled “SYMB NOVAE” is the median of the brightest nine variables which are probably very slow and/or symbiotic novae.

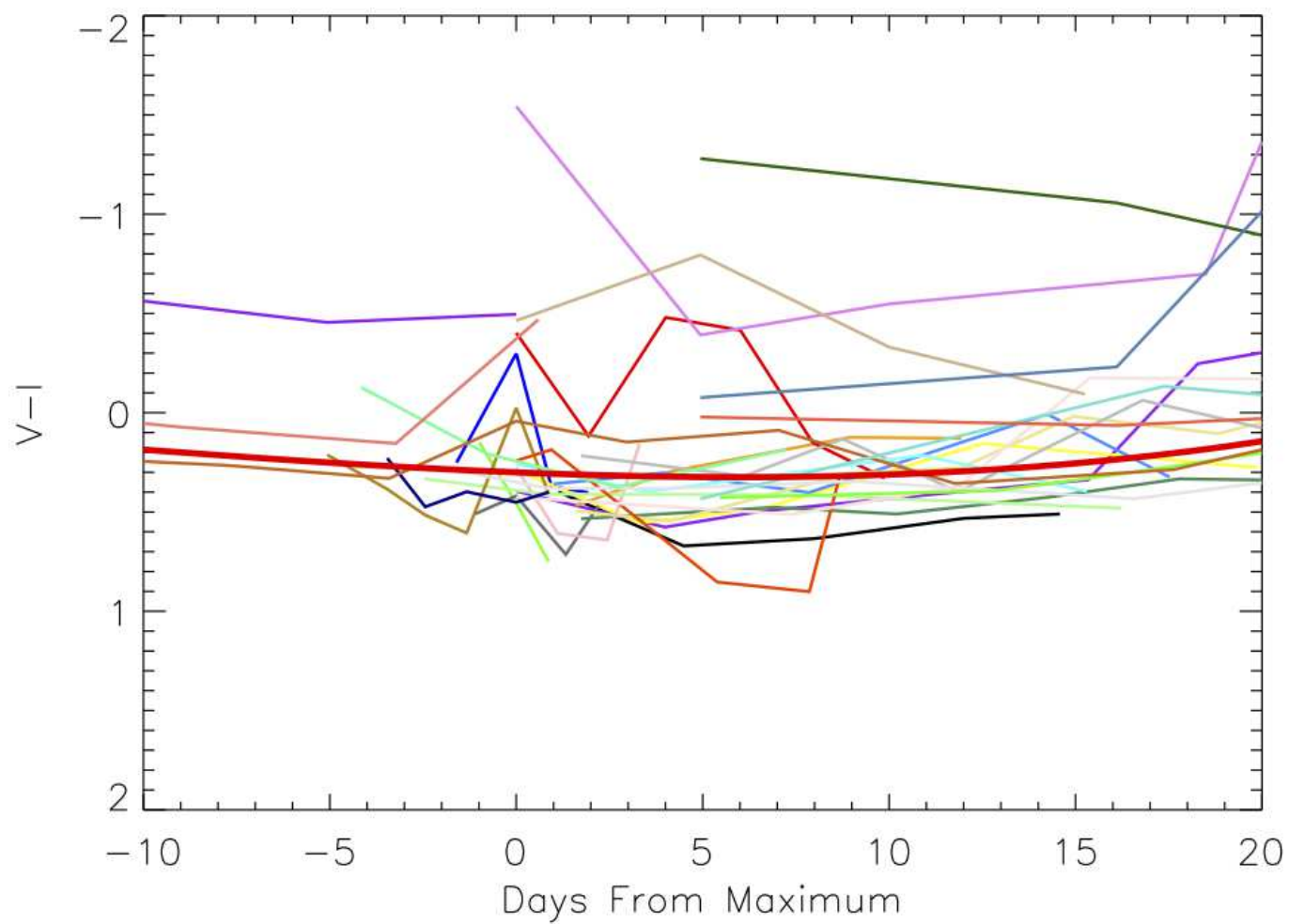


Figure 8b. Figure 8a zoomed in for more detail around the peak magnitude. The thick red line is the median of all nova color curves.

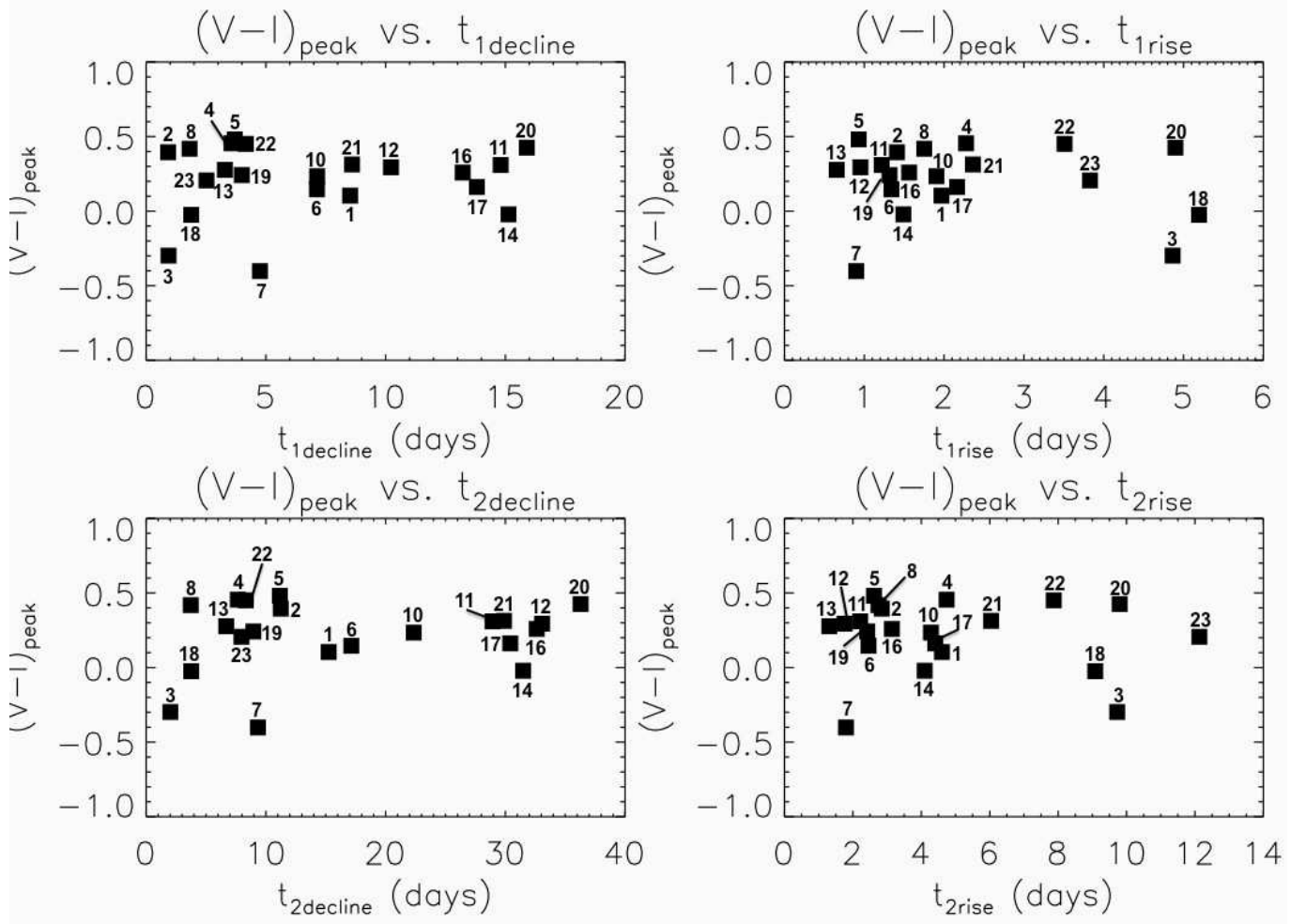


Figure 9. $(V-I)_{\text{peak}}$ color of M87 novae versus times required to decline or rise by 1 or 2 magnitudes, respectively. Only those novae which clearly show a rise, a peak, and a decline are used in figures 9 through 13, inclusive. Rise and decline times are in days, and the nova number corresponds to those in Figures 1, 2 and 3.

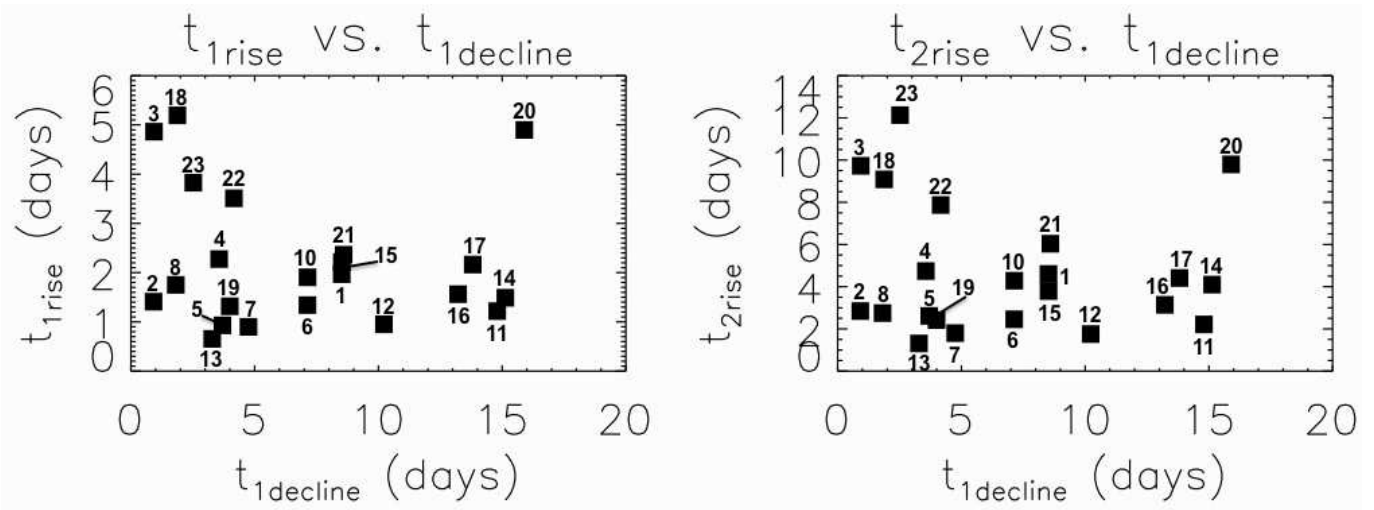


Figure 10. Rise times of 1 and 2 magnitudes plotted as a function of decline time of 1 magnitude.

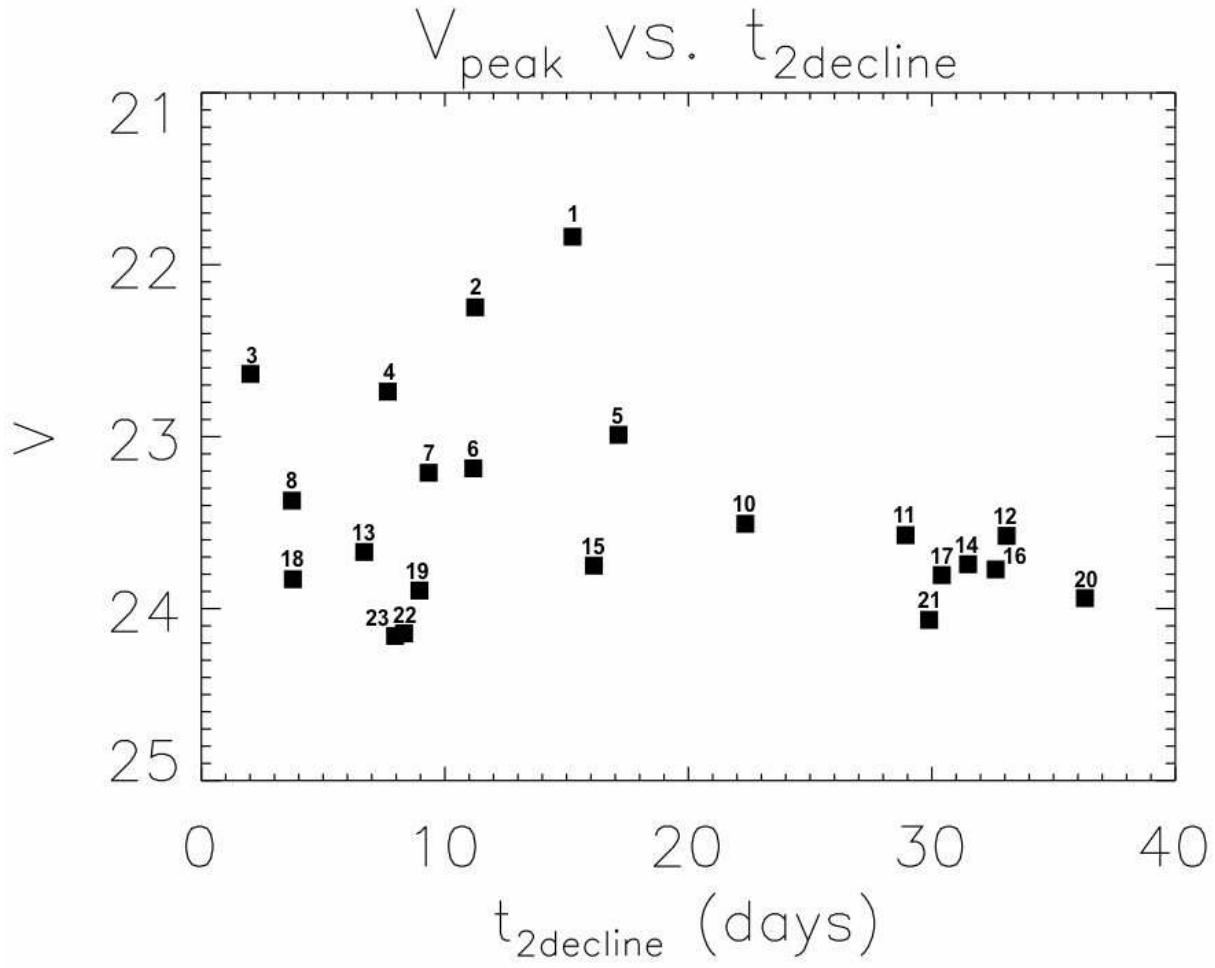


Figure 11. Peak F606W (V) magnitude vs $t_{2\text{decline}}$ - the MMRD relation.

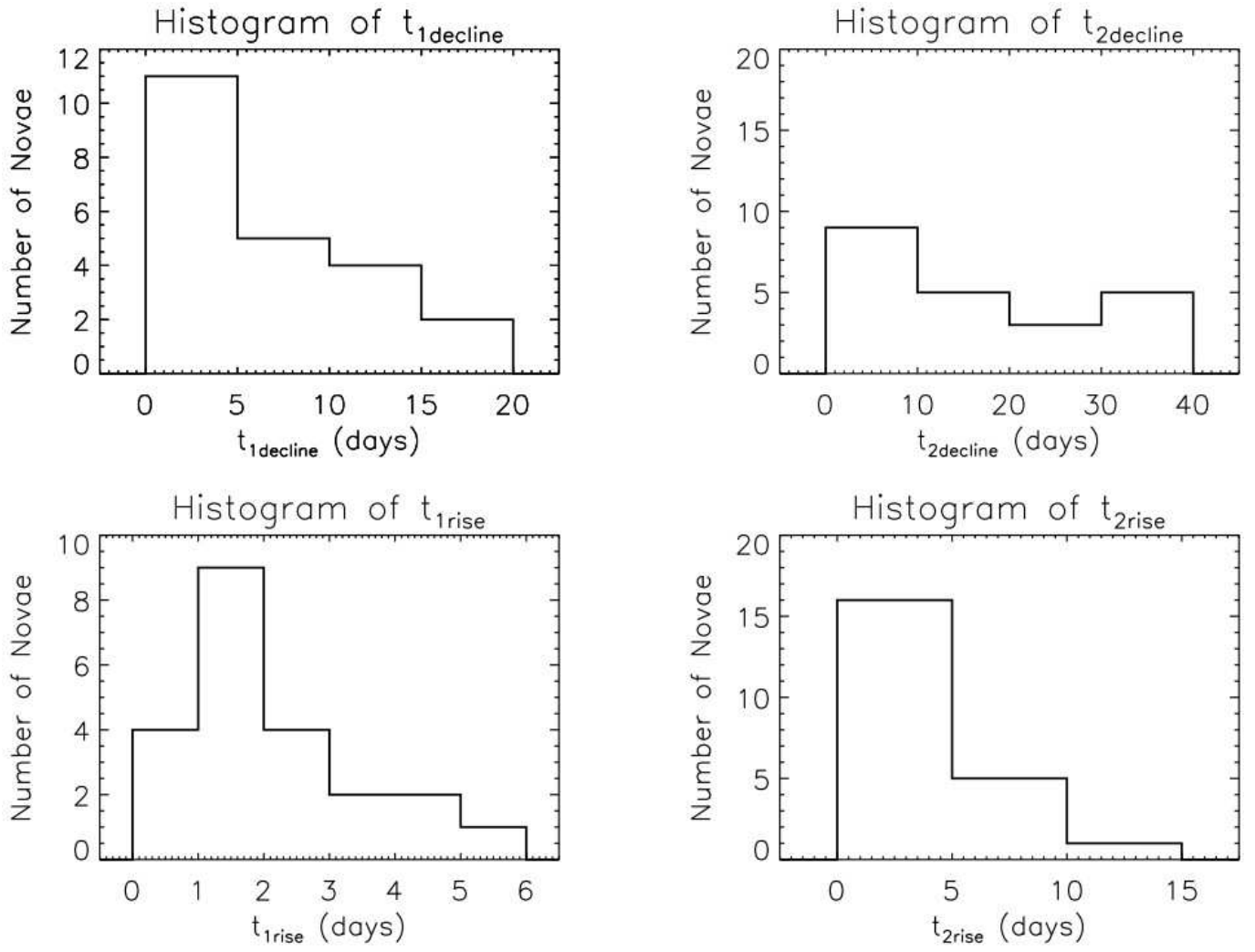


Figure 12. Histograms of decline and rise times for M87 novae.

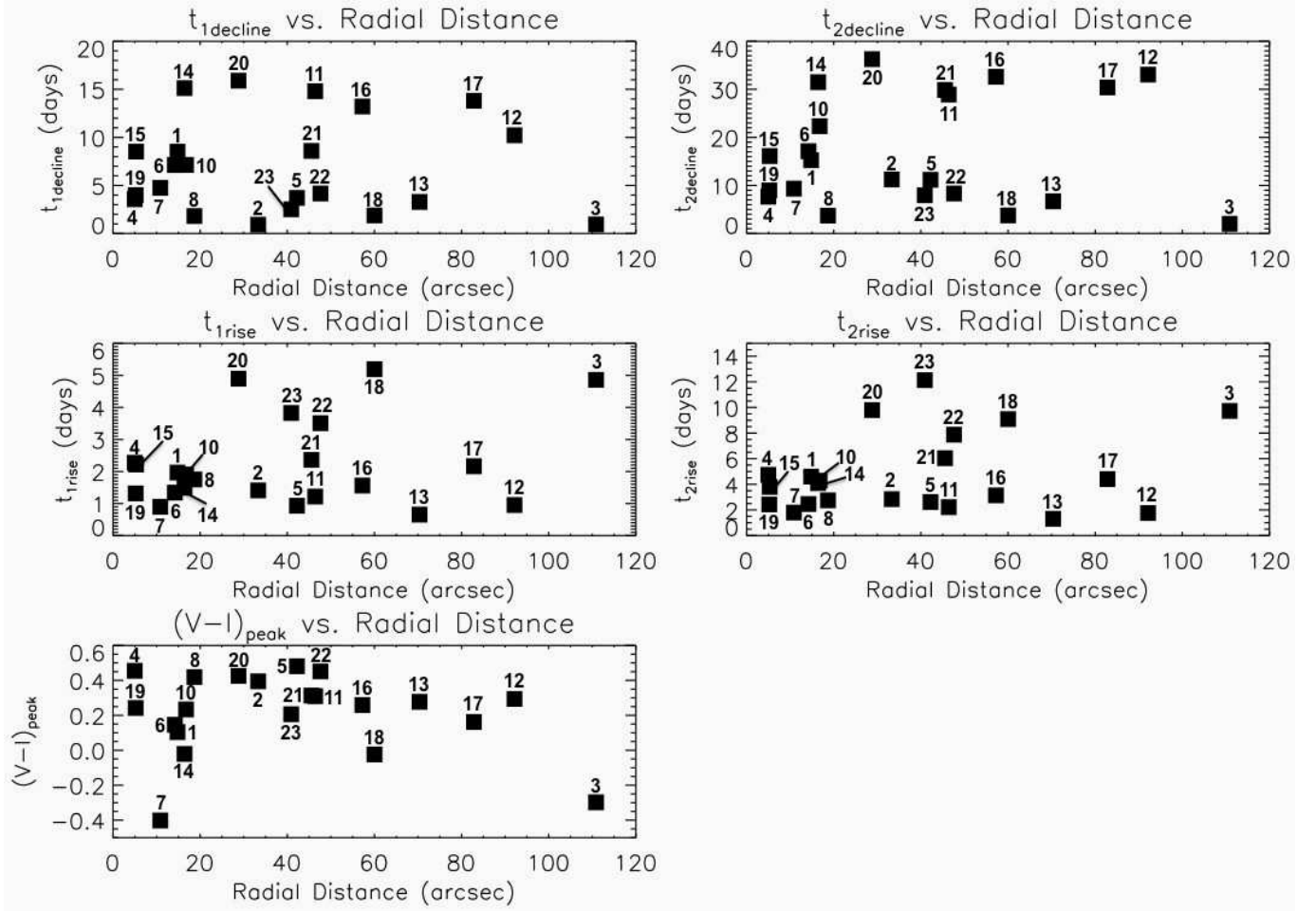


Figure 13. Rise and decline times and $(V-I)_{\text{peak}}$ colors of classical novae as a function of distance from the center of M87.

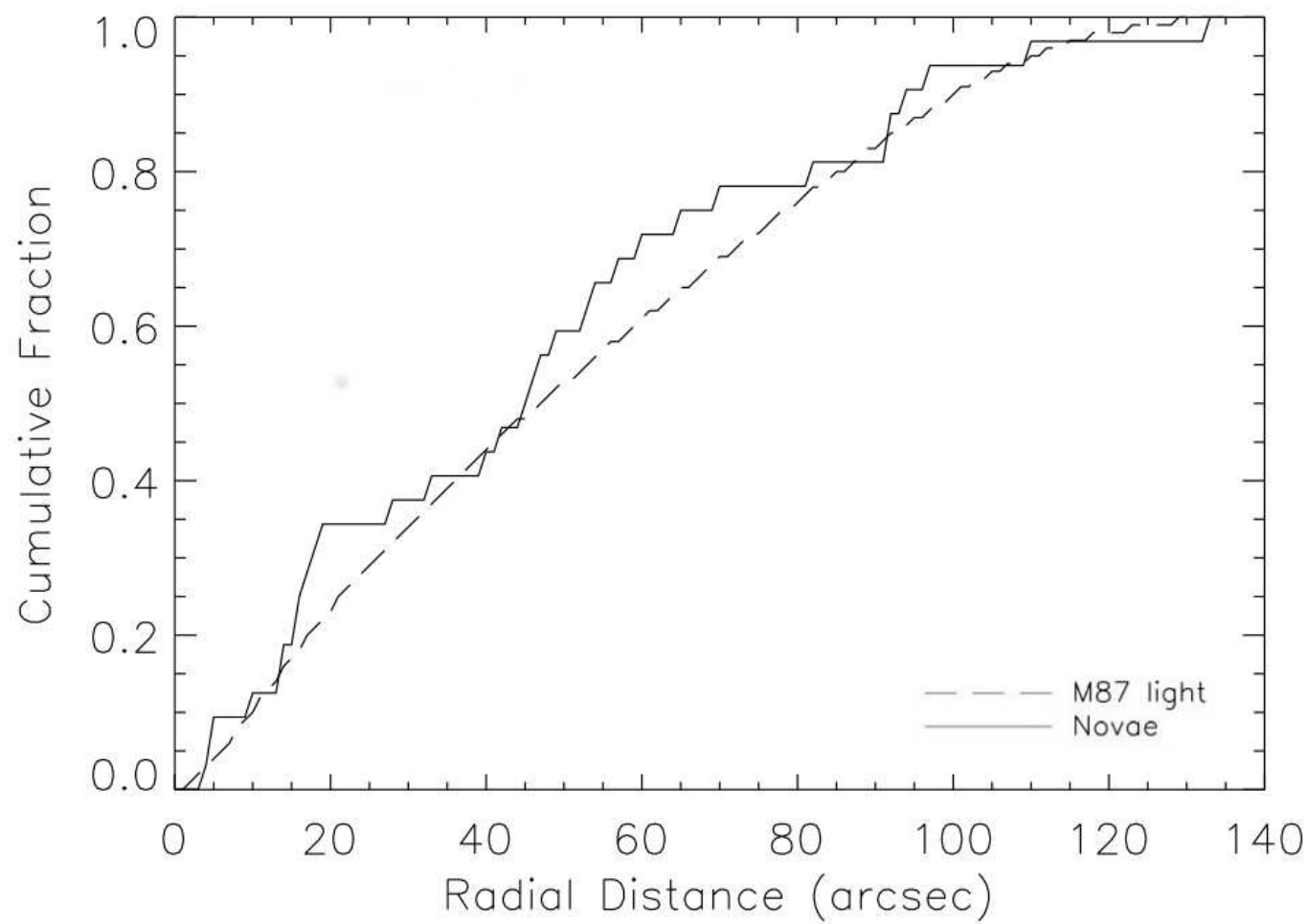


Figure 14. The cumulative fraction of classical novae and light of M87 as a function of distance from the center of the galaxy.

Magnitude of 50% Completeness vs. Radial Distance

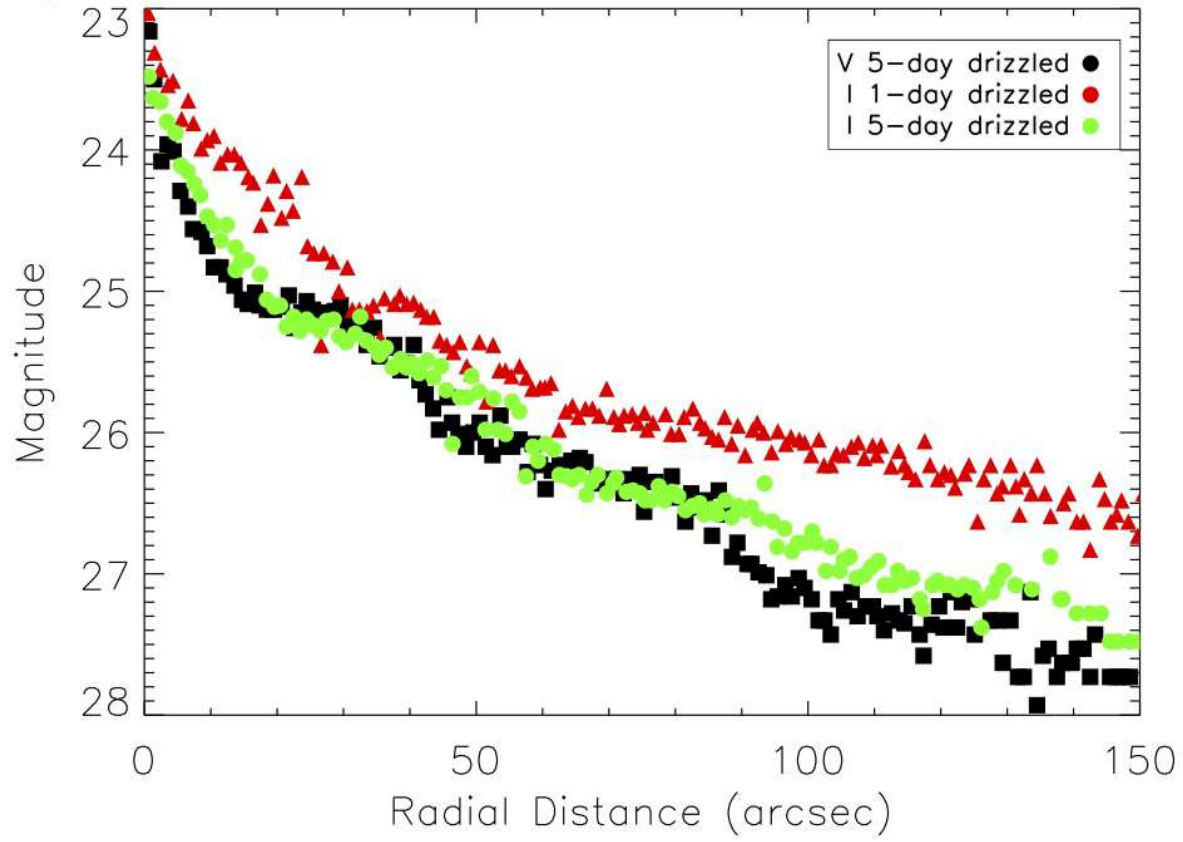


Figure 15. Magnitude at 50% recovery in each radial bin for 5-day drizzled *V* images (black squares), single-day *I* images (red triangles), and 5-day drizzled *I* images (green circles).

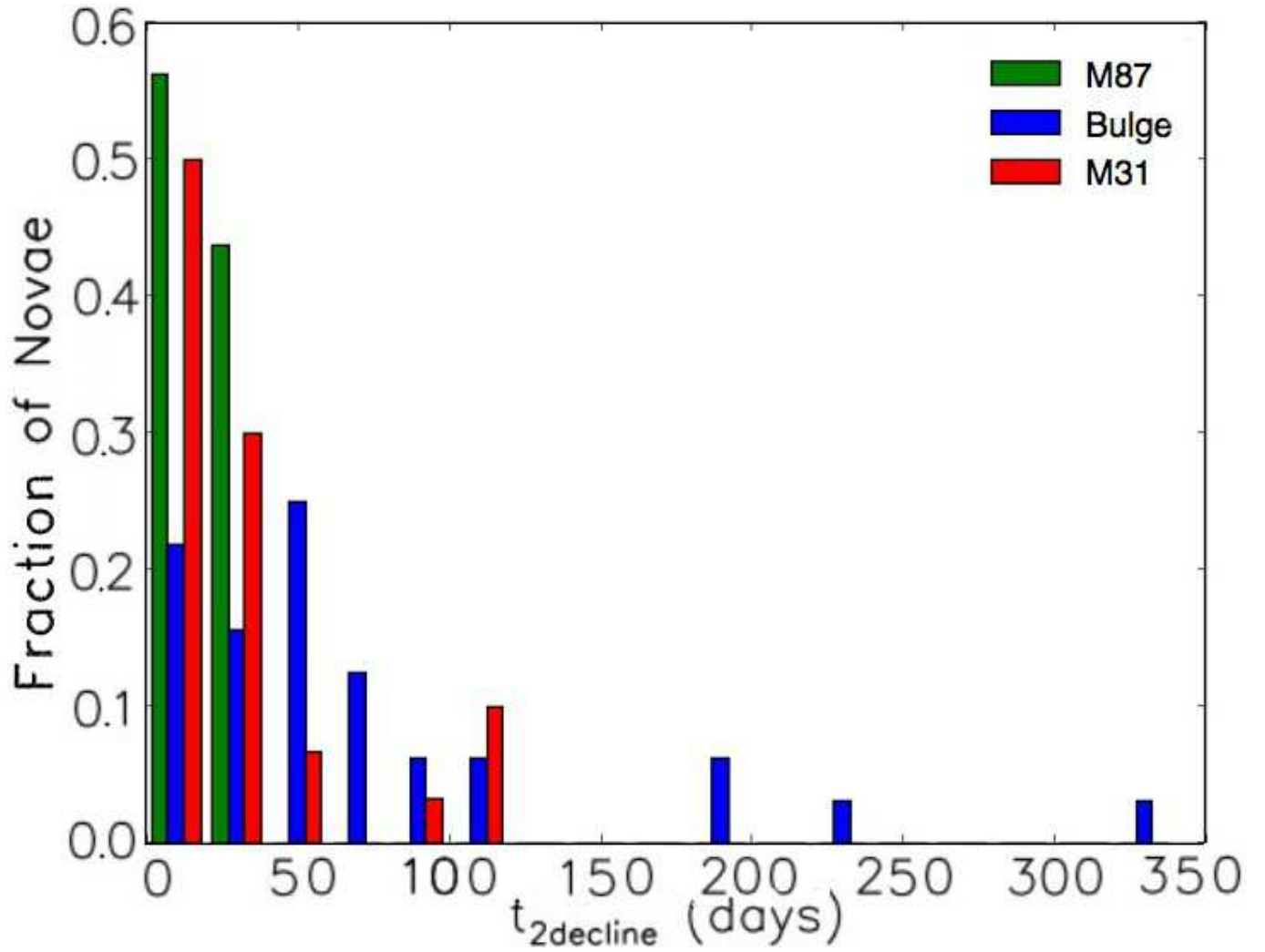


Figure 16. Histograms of the distributions of times to decay by 2 magnitudes for the most complete samples of novae in the Galactic Bulge, M31 and M87 (the present work). The samples have time baselines of about 15 years (the Bulge), 1.5 years (M31), and 72 days (M87). Longer baselines lead to the detections of more slowly decaying, intrinsically fainter novae, important ingredients in correctly deriving the rate of nova eruptions in a galaxy. See text for details.

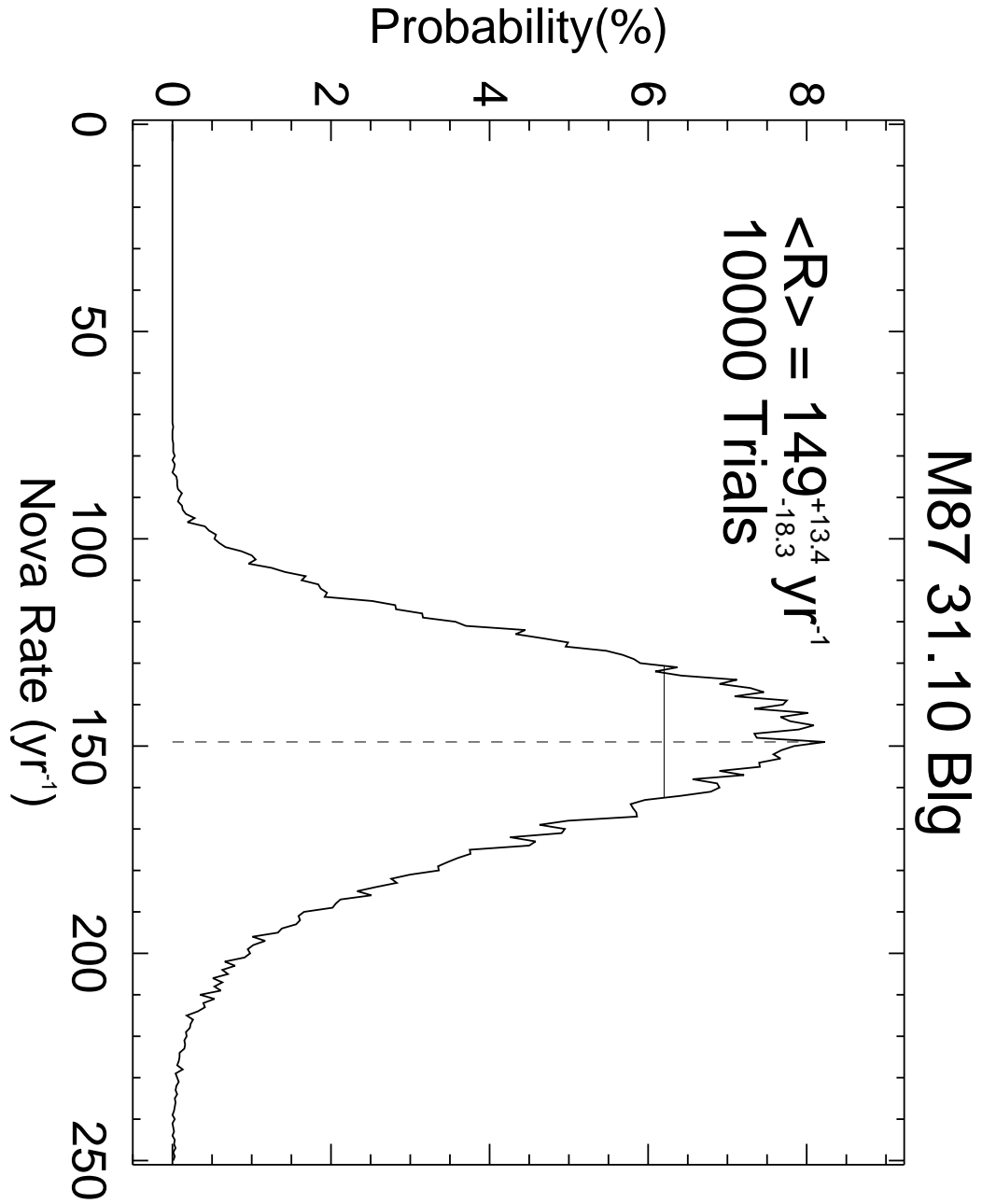


Figure 17. The distribution of probabilities of varying annual classical nova rates in the area of M87 imaged by HST. The most probable rate in the $202'' \times 202''$ HST FOV is $R = 149^{+13.4}_{-18.3}$ classical novae/year, which corresponds to a global M87 classical nova rate of 363^{+33}_{-45} novae/year. That conservative rate ONLY assumes the brightest 32 novae in our sample to be true novae. The nova rate is significantly higher if some or all of the slow/symbiotic nova candidates (numbered 33-41, inclusive) are, in fact, novae.

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